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PROCEEDINGS

OF THE

MEDICAL SOCIETY

OF

LONDON.

VOL. IV.
1877–1879.

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D. H. GOODSALL, F.R.C.S.

LONDON:
PRINTED BY
J. E. ADLARD, BARTHOLOMEW CLOSE.
1879.

PREFACE.

In accordance with the wish of the Council, the fourth volume of 'Proceedings' is now issued to the Fellows.

Inasmuch as it consists mostly of abstracts of communications on medical and surgical subjects, together with a brief record of the discussions to which such contributions gave rise, the title 'Proceedings' is still retained. But the progressive importance of the communications, and the greater fulness of the abstracts, may render the title of 'Transactions' more appropriate to our future volumes.

Believing that the Fellows will find the volume of 'Proceedings' which records the work done during the past two sessions to be of increasing value, I venture to hope that they will continue to take an active interest in the papers and discussions of the Society.

JOHN COCKLE, *President.*

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N.B.—Essays competing for the prizes are to be sent in before the 1st day of the preceding November.

Deceased Benefactors of the Society.

1778	JOHN COAKLEY LETTSOM, M.D., A FREEHOLD HOUSE, No. 3, BOLT COURT, FLEET STREET (Value)	£2500
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1807	NATHANIEL HULME, M.D.	£50

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SUBJECT:—*"On General Paralysis of the Insane."*

For March, 1879.

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SUBJECT:—"*The Pathology and Treatment of Dysmenorrhœa.*"

For March, 1880.

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Past Lettsomian Lecturers.

(THE LETTSOMIAN LECTURES COMMENCED IN 1851.)

SESSION	
1850-51	G. Owen Rees, M.D., F.R.S., "On some of the Pathological Conditions of the Urine." G. J. Guthrie, F.R.S., "On some of the more Important Points of Surgery."
1851-52	Forbes Winslow, M.D., "On Medico-legal Evidence in Cases of Insanity." Henry Hancock, F.R.C.S., "On the Anatomy and Physiology of the Male Urethra, and on the Pathology of Stricture of that Canal."
1853-54	E. W. Murphy, M.D., "On Parturition as Illustrating the Importance of a Competent Education in the Practice of Midwifery."
1854-55	Theophilus Thompson, M.D., "On Pulmonary Consumption." John Bishop, F.R.S., "On the Physical Constitution, Diseases and Fractures of Bones."
1854-55	Francis Sibson, M.D., F.R.S., "On the Influence of the Nervous System on Respiration and Circulation." Francis Hird, "On some Special Points in the Anatomy of the Uterus, and its Structural Lesions the result of Inflammation."
1855-56	None.
1856-57	Alfred B. Garrod, M.D., F.R.C.P., "Illustrations of the Pathology and Treatment of Gout."
1857-58	Robert Barnes, M.D., "On the Physiology and Treatment of Flooding from Unnatural Position of the Placenta." Edwin Lankester, M.D., "On the History, Symptoms, and Treatment of Intestinal and other Worms Parasitic on the Human Body."
1858-59	Fredk. Headland, M.D., "On the Advance during Modern Times of the Science of Medical Treatment." Victor de Méric, "On Syphilis."
1859-60	F.W. Pavy, M.D., F.R.S., "On Certain Points connected with Diabetes." Andrew Clark, M.D., "On Certain Evidences of the Arrestment of Phthisis."
1860-61	C. J. Hare, M.D., "Practical Observations on some of the Points of Difficulty in the Investigation of Tumours and Intumescence of the Abdomen." Haynes Walton, "On the Application of the Ophthalmoscope, and its Advantages."

SESSION	
1861-62	B. W. Richardson, M.D., F.R.S., "On certain of the Phenomena of Life." F. W. Mackenzie, M.D., "On the Pathology and Treatment of Phlegmasia Dolens."
1862-63	Henry Thompson, "On Practical Lithotomy and Lithotrity." James Bird, M.D., "On Public and Private Hygiene."
1863-64	Thomas Bryant, "On the Surgical Diseases of Children." C. H. F. Routh, M.D., "On some Points connected with the Pathology, Differential Diagnosis, and Treatment of Fibrous Tumours of the Uterus."
1864-65	Henry Smith, "On the Surgery of the Rectum." J. L. W. Thudichum, M.D., "On Medicine: the Progress of Urology, with Practical Illustrations of its Value in the Diagnosis and Treatment of several Diseases."
1865-66	F. E. Anstie, M.D., "On certain Painful Affections of the Fifth Nerve."
1866-67	John Gay, "On Varicose Diseases and Ulcers of the Lower Extremities."
1867-68	George Buchanan, M.D., "On the Diagnosis and Management of Lung Diseases in Children."
1868-69	William Adams, "On Rheumatic and Strumous Diseases of the Joints, and the Treatment for the Restoration of Motion in Partial Ankylosis."
1869-70	Tilbury Fox, M.D., "Eczema: its Nature and Treatment."
1870-71	Fred. J. Gant, "On Excisional Surgery of the Joints; the Conditions appropriate for Excision; the Operations; After-Treatment and Results."
1871-72	S. O. Habershon, M.D., "On the Pathology and Treatment of some Diseases of the Liver."
1872-73	Henry Lee, "Urethral Discharges."
1873-74	W. H. Broadbent, M.D., "On Syphilitic Affections of the Nervous System."
1874-75	C. F. Maunder, "On the Surgery of the Arteries."
1875-76	C. T. Williams, M.D., "The Influence of Climate in the Treatment of Pulmonary Consumption."
1876-77.	Alfred Wiltshire, M.D., "On Vascular Rhythm as exemplified in Periodical Hæmorrhages, General and Local; and on the Treatment of Hæmorrhages from the Female Generative Organs."
1877-78.	Francis Mason, "On the Surgery of the Face."
1878-79.	J. C. Thorowgood, M.D., "On Bronchial Asthma: its Causes, Pathology, and Treatment."

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1779	Dr. E. Edwards.
1780	Dr. Koystraa.
1781	Dr. Simmons.
1782	Dr. Wood.
1783	Dr. John Sims (2nd).
1784	Dr. Whitehead.
1785	Dr. Ralph.
1786	————
1787	Mr. Hooper.
1788	Dr. Meyer.
1789	Dr. Dennison.
1790	Dr. Wallis.
1791	Dr. Sutton.
1792	Dr. Fryer.
1793	Dr. Jameson.
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1795	John Abernethy.
1796	Dr. J. C. Lettsom (2nd).
1797	Mr. Ware.
1798	Dr. Ferris.
1799	Mr. Ford.
1800	Dr. Bradley.
1801	Mr. Chamberlain.
1802	Dr. John Sims (3rd).
1803	Mr. Andreæ.
1804	Dr. J. C. Lettsom (3rd).
1805	Dr. Pinckhard.
1806	Mr. Field.
1807	Dr. Joseph Adams.
1808	Mr. John Mason Good.
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1810	Dr. Birkbeck.
1811	Mr. Blair.
1812	Dr. Temple.
1813	Mr. Saumarez.
1814	Dr. Rees.
1815	Mr. Taunton.
1816	Dr. Clutterbuck.
1817	Mr. Stevenson.
1818	Mr. David Uwins.
1819	Mr. Pettigrew.
1820	Dr. Hancock.
1821	Mr. Callaway.
1822	Dr. Copland.
1823	Mr. Grainger.
1824	Dr. G. Smith.
1825	Mr. Lloyd.
1826	Dr. Haslam.
1827	Mr. Kingdon.
1828	Dr. Burne.
1829	Mr. W. G. Jones.
1830	Dr. Leonard Stewart.
1831	Mr. Gossett.
1832	Dr. Whiting.
1833	F. Salmon.
1834	Dr. Shearman.
1835	Mr. W. C. Dendy.
1836	Dr. Blicke.
1837	Edward Headland.
1838	Dr. Theophilus Thompson.
1839	Geo. Pilcher.
1840	Dr. Risdon Bennett.
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1845	Dr. Marshall Hall.
1846	John Bishop.

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1849	Dr. Willshire.
1850	Francis Hird.
1851	Dr. Rowland.
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1853	Dr. John Snow.
1854	Henry Smith.
1855	J. F. Clarke.
1856	Dr. B. W. Richardson.
1857	William Adams.
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1831	W. A. Guy.
1834	W. J. Clement.
1835	G. Moore.
1836	T. E. Bryant.
1838	G. Pilcher.
1840	T. Osborn.
1842	J. R. Bennett, M.D.
1843	J. C. Lerow, M.D.
1844	H. P. Robarts.
1845	W. C. Dendy.
1846	R. M. Glover, M.D.
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1851	R. P. Cotton, M.D.
1851	R. Hodges.
1852	F. W. Headland, B.D.
1853	A. Poland.
1854	B. W. Richardson.
1856	W. Burke Ryan, M.B.
1857	E. Canton, F.R.C.S.
1858	T. H. Barker, M.D.
1859	A. T. H. Waters.
1868	John Clay.
1870	T. S. Clouston, M.D.
1872	Edwards Crisp, M.D.
1874	J. K. Spender, M.D.
1876	P. M. Braidwood, M.D.
1878.	J. Milner Fothergill, M.D.

Honorary Fellows.

ASHBURNER, J., M.D. (1825), 7, Hyde-park-place, W. p.

BARKER, FORDYCE, M.D. (1878), 85, Madison-avenue, New York, Professor of Clinical Midwifery and Diseases of Women at the Bellevue Hospital Medical College; Obstetric Physician to the Bellevue Hospital; Consulting Physician to the New York State Women's Hospital, &c.

BARNES, J. M., M.D. (1876), Surgeon-General U.S. Army, Washington.

BENNETT, J. RISDON, M.D. (1837; FM 1842), 22, Cavendish-square, W., President of the Royal College of Physicians; Consulting Physician to St. Thomas's Hospital and to the Victoria-park Hospital. p 2, vp 2, c 7, o, s 3, ‡ 8.

BURROWS, Sir GEORGE, Bart., M.D., F.R.C.P., D.C.L., F.R.S. (1873), 18, Cavendish-square, W., Physician in Ordinary to H.M. the Queen; Consulting Physician to St. Bartholomew's Hospital; Member of the Senate of the University of London.

CHAUVEAU, Professor (1873), Lyons.

CHRISTISON, Sir ROBERT, Bart., M.D., F.R.C.P. Ed., D.C.L., LL.D. (1873), 40, Moray-street, Edinburgh, Physician-in-Ordinary to H.M. the Queen, in Scotland.

CORMACK, Sir JOHN ROSE, M.D. (1878), Paris.

FARRE, ARTHUR, M.D., F.R.C.P., F.R.S. (1873), 18, Albert Mansions, S.W., Physician-Extraordinary to H.M. the Queen; Physician-Accoucheur to H.R.H. the Princess of Wales and H.I.R.H. the Duchess of Edinburgh.

FLINT, AUSTIN, M.D. (1876), Senior Professor of Medicine in the Bellevue Hospital Medical College, New York, U.S.A.

GROSS, SAMUEL D., M.D., F.C.P. Philad., D.C.L. Oxon., LL.D. (1876), Professor of Surgery in the Jefferson Medical College of Philadelphia, U.S.A.

GUENEAU DE MUSSY, NOEL, M.D. (1873), Rue St. Arnaud, Paris.

HANCOCK, HENRY, F.R.C.S. (1838), Standen House, Chute, Wilts, Consulting Surgeon to Charing Cross Hospital. p 4, vp 5, c 8, ll, o, t 8, ‡ 14.

*HARE, CHARLES J., M.D., F.R.C.P. (1869), 57, Brook-street, W., late Professor of Clinical Medicine in University College; Physician to University College Hospital, &c. p, vp 2, c 8, ll, ‡ || 2. (*Trustee.*)

HAWKINS, CÆSAR, F.R.S. (1848), 26, Grosvenor-street, W., Serjeant-Surgeon to H.M. the Queen; Consulting Surgeon to St. George's Hospital. c 2, s.

HEBRA, FERDINAND, M.D. (1873), Professor of Dermatology in the University of Vienna.

HELMHOLTZ, H., M.D. (1873), Berlin, Professor of Physiology in the University of Berlin.

HUXLEY, THOMAS HENRY, LL.D., F.R.S. (1873), 4, Marlborough-place, St. John's Wood, N.W., Professor of Natural History in the Royal School of Mines.

JENNER, Sir WILLIAM, Bart., K.C.B., M.D., D.C.L., F.R.S. (1875), 63, Brook-street, W., Physician-in-Ordinary to H.M. the Queen and to H.R.H. the Prince of Wales; Professor of Clinical Medicine in University College, London; Physician to University College Hospital.

JOHNSTONE, H. J. W., F.R.C.S. (1843), 8, Suffolk-place, Pall-mall East.

LANGENBECK, BERNHARD VON, M.D. (1873), Berlin, Professor of Surgery in the University of Berlin.

MERCIER, LOUIS AUGUSTE, M.D. (1876), Paris.

MITCHELL, S. WEIR, M.D., 1332, Walnut-street, Philadelphia, Physician to the Philadelphia Orthopædic Hospital and Infirmary for Diseases of the Nervous System.

OLLIER, Professor (1875), Lyons.

OWEN, RICHARD, C.B., D.C.L., LL.D., F.R.S., F.R.C.S. (1873), Sheen Lodge, Richmond Park, Mortlake, Superintendent of the Natural History Departments of the British Museum.

PAGET, Sir JAMES, Bart., D.C.L., LL.D., F.R.S. (1873), 1, Harewood-place, Hanover-square, W., Serjeant-Surgeon to H.M. the Queen; Surgeon to H.R.H. the Prince of Wales; Consulting Surgeon to St. Bartholomew's Hospital; Member of the Senate of the University of London.

PANCOAST, JOSEPH, M.D. (1876), Professor of Anatomy in the Jeffreson Medical College, 1030, Chesnut-street, Philadelphia, Pa.

QUAIN, RICHARD, F.R.S., F.R.C.S. (1837), 32, Cavendish-square, W., Surgeon-Extraordinary to the Queen; Emeritus Professor of Clinical Surgery, University College. VP, C.

ROKITANSKY, CARL, M.D. (1873), Vienna, Curator of the Imperial Pathological Museum; Professor of the University of Vienna.

SANNÉ, A. (1877), 11, Rue Cambacérès, Paris.

SCANZONI, F. W. VON, M.D. (1873), Wurzburg, Professor of Midwifery in the University, Wurzburg.

SEAONE, M., M.D. (1835), Salamanca.

SMITH, J. GREGORY, F.R.C.S., 23, Gloucester-place, Greenwich, S.E. VP, C 4.

TYNDALL, JOHN, LL.D., F.R.S. (1873), Professor of Natural Philosophy in the Royal Institution, Albemarle-street, Piccadilly, W.

VIRCHOW, RUDOLPH, M.D. (1873), Berlin, Professor of Pathological Anatomy in the University of Berlin.

WILLIAMS, C. J. B., M.D., F.R.C.P., F.R.S. (1838), 47, Upper Brook-street, W., Physician-Extraordinary to H.M. the Queen; Senior Consulting Physician to the Brompton Hospital for Consumption. || 2.

Corresponding Fellows.

Elected	
1851	Albaro, Sir D. J. Mendez, Madrid.
1861	Alvarenga, Pedro Francisco da Costa, M.D., Lisbon.
1856	Baker, Albert, M.D., Dawlish, Devonshire, Physician to the Dawlish Dispensary.
1855	Beardsley, A., Bay Villa, Grange, Lancashire. ||.
1850	Benavente, Sr. D. Mariano, Madrid.
	Beneke, F. W., M.D., New York.
1865	Boeck, Professor, Christiania.
1850	Böhm, —, M.D., Vienna.
——	Bottani, Giuseppe, M.D., Milan.
——	Brander, J., M.D., India; in London, East India Club, St. James's-square.
1865	Braun, Professor Carl, Vienna, Physician to the General Lying-in Hospital.
1837	Bühring, J. J., M.D., Berlin.
1850	Burke, J. Page, M.D., Staff Surgeon, R.N.
1874	Burness, A. G., M.D., Port Elizabeth, Cape of Good Hope.
——	Cade, Thomas Charles, Spondon, Derby
1855	Clark, Alfred, Twickenham.
1855	Coates, Charles, M.D., 10, Circus, Bath, Physician, Bath Royal United Hospital. c 3, ‡ 2, || 3.
1850	Cox, William I., Hawkesbury Upton, Gloucestershire. c.
1850	Curtis, George, Dorking.
1851	Cutler, Edw., M.A., Spa, Belgium.
1851	Czermak, John, M.D., Prague, Professor of Anatomy and Physiology.
1876	Dawes, R. S., Gawler, South Australia.
——	De Muynck, J., M.D., Ghent.
1865	Diday, Paul, M.D., Lyons.
1836	Da Sa, Manoel Carvalho Pereira, M.D., Rio Janeiro.
——	Ecstein, Sigismund, M.D., Vienna.
1851	Escolar, Sr. D. Serapio, Madrid.
——	Eylandt, Johann Emil, M.D., Curland, Russia.
1865	Falconer, Randle Wilbraham, M.D., F.R.C.P., 22, Bennett-street, Bath, Consulting Physician to the Royal United and Mineral Water Hospitals.
1853	Fallot, R., M.D., St. Laurant d'Aigonze, Montpelier, France.
1864	Fideli, G., M.D., Rome.
1851	Flor, Sr. D. Jose Perez, Madrid.

Elected

1876 Griffith, R. Glyn, Dinapore, India.
—— Harding, George, East Indies, 37th Native Infantry.
1864 Hasenfeld, Emmanuel, M.D., Pesth.
1867 Hughes, J. S., M.D., Dublin.
—— Hughes, Robert, F.R.C.S., Barnstaple, Devon.
—— Hyman, —, M.D., Antwerp.
1851 Izguierdo, Sr. Dr. Sebastian Ortega, Madrid.
—— Jackson, J. M., Madras, Madras Light Infantry.
—— Jeyes, Samuel, M.D., Half-pay Staff.
1875 Jones, P. Sydney, M.D., College-street, Sydney, Australia.
1861 Journez, Henri, M.D., 43, Rue de la Charité, Bruxelles, Belgique.
1852 Junod, Theodore, M.D., Geneva.
—— Kitching, G., M.D., Enfield.
1851 Kölliker, Albert, M.D., Wurzburg, Professor of Anatomy and Physiology.
—— Lax, William, Ormskirk, Lancashire, Surgeon to the Ormskirk Dispensary.
1876 Leighton, Walter H., M.D., Lowell, Massachusetts, U.S.
—— Leon, Sr. D. Jose, Madrid.
1851 Llanos, Sr. Antonio Campo, Madrid.
1851 Lovera, Sr. D. Jose, Madrid.
1851 Marino, Sr. D. Bonifacio Mateos, Madrid.
1851 Mendez, Sr. D. Bartholome, Madrid.
1851 Molina, Sr. D. M. M., Madrid.
—— Moore, George, M.D. (fm 1834), Hastings. ‡ 2.
—— Nash, James, M.D., High-street, Worcester, Consulting Physician to the Worcester Infirmary.
—— Negri, Gaetano, M.D., Pisa.
1851 Ortega, Sr. D. J. R., Madrid.
1865 Peruzzi, Domenico, M.D., Sinegaglia.
1851 Portilla, Sr. D. L. Luis, Madrid.
1860 Roussel, Dr., Dean of Faculty and Medicine at Montpelier.
—— Scharla‡, Gus. W., M.D., Stettin, Prussia.
1876 Schmitz, Richard, M.D., Neuenahr.
1874 Schutgowsky, J., St. Petersburg.
1852 Seaton, Jos. M.D., F.R.C.P. (Edin.), F.R.G.S., Halliford House, Sunbury. ‡ 5.
1851 Sesse, Sr. D. M., Mesqui, Madrid.
—— Stockwell, Thomas G., F.R.C.S., 9, Alfred-street, Bath.
—— Stolterfoth, Sigismund, M.D., F.R.C.P., Queen's-park, Chester.
1851 Tereza, Sr. L. Felix Garcia, Madrid.
1851 Valdez, Sr. D. Franco Cortigo, Madrid.
—— Williams, Charles, F.R.C.S. Edin., 9, Prince of Wales-road, Norwich.
—— Wilson, Charles, M.D., Dalrymple-crescent, Grange, Edinburgh.

GENERAL LIST OF FELLOWS OF THE SOCIETY.

EXPLANATION OF ABBREVIATIONS.

P.—President.
VP.—Vice-President.
T.—Treasurer.
L.—Librarian.
S.—Secretary.
C.—Councillor.
LL.—Lettsomian Lecturer.
FM.—Fothergillian Gold Medallist.
SM.—Silver Medallist.
O.—Orator.
§—Sec. for Foreign Correspondence.
‡—Steward.
*—Life Members.
||—Conversazione Steward.

The number prefixed (*e.g.* 1853) signifies the date of election.

The figures appended (*e.g.* s 2, c 3) indicate the number of Sessions served, and refer to past appointments ONLY.

NS.—Non-subscribing.

Elected

1878 **Adams, J. Oake**, F.R.C.S., Medical Superintendent, Brook House, Clapton, E. ‡.

1873 **Adams, M. A.**, F.R.C.S., Maidstone, Kent, Surgeon to the Kent County Ophthalmic Hospital.

1872 **Adams, T. Rutherford**, M.D., Stamford House, Croydon, Surgeon to the Croydon General Hospital. ||.

1852 * **Adams, William**, F.R.C.S., Surgeon to the Great Northern Hospital, 5, Henrietta-street, Cavendish-square, W. (*Councillor.*) c 8, o, vp 3, || 1, ll, p, ‡ 8.

1868 **Aitken, Wm.**, M.D., F.R.S., Woolston, Southampton, Professor of Pathology, Army Medical School, Netley. ||. ns. ‡ 2.

1872 **Aldred, Henry Allen**, M.D., 4, Westbourne-park, W. ‡ 2.

1878 **Allchin, William Henry**, M.B., F.R.C.P., F.R.S.E., 94, Wimpole-street, W., Physician to, and Lecturer at, Westminster Hospital.

1873 **Allen, H. Marcus**, M.R.C.P. Edin., 38, Regency-square, Brighton. ‡.

1873 **Allfrey, C. H.**, M.D., F.R.C.S., St. Mary's Cray, Chislehurst, Kent. ||.

1872 **Allingham, William**, F.R.C.S., 25, Grosvenor-street, Grosvenor-square, W., Surgeon to St. Mark's Hospital. c, ‡ 5.

Elected

1860 Althaus, Julius, M.D., 36, Bryanston-street, Portman-square, W., Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park. c 5, ‡ 3, §.

1871 Ambler, Vincent, 14, Colville-square, Bayswater, W. || 4, ‡.

1868 Amstrong, John, M.D., Dartford. ns.

1868 Armstrong, John Christopher, Gravesend. ns.

1871 Arnold, Wilberforce, Belfast. ns.

1867 Aspray, Charles Owen, M.D., F.R.C.S., 4, Devonshire-street, Portland-place, W., Surgeon to the Western Dispensary for Diseases of the Skin.

1873 Atkinson, Edward, 36, Albion-street, Leeds, Surgeon to the Leeds General Infirmary; Lecturer on Surgery to the Leeds School of Medicine.

1872 Aveling, James H., M.D., 1, Upper Wimpole-street, W., Obstetric Physician to St. Marylebone Dispensary; Physician to the Chelsea Hospital for Women. ‡.

1873 Bagshawe, Frederic, M.A., M.D., F.R.C.P., 5, Warrior-square, St. Leonards, Assistant Physician to the East Sussex Infirmary. ‡.

1871 Bailey, George H., 9, Cavendish-place, W., Chloroformist to the Charing Cross Hospital, the Cancer and Dental Hospitals. ‡.

1873 Bailey, James J., M.D., Marple, Cheshire.

1878 Baker, Henry F., F.R.C.S. Edin., Royal Orthopædic Hospital. ‡.

1878 Baldock, Alfred, M.B., 180, Earl's Court-road, S.W.

1879 Balkwill, William Edward, 9, Old Cavendish-street, Cavendish-square, W., Surgeon to the Royal Orthopædic Hospital. ‡.

1859 Barnes, J. Wickham, F.R.C.S., 3, Bolt-court, E.C. (*Councillor.*) ‡ 6, c 3, s 2, ||.

1876 Barnes, R. S. Fancourt, M.D., 39, Weymouth-street, W., Physician to the British Lying-in Hospital; Physician-Accoucheur to the St. George and St. James's Dispensary. ‡.

1871 Barry, D. Paterson, M.D., Twickenham. ns.

1874 Barrett, Howard, 3, Tavistock-square, W.C.

1868 Bateman, Frederic, M.D., F.R.C.P., Upper St. Giles-street, Norwich, Physician to the Norwich and Norfolk Hospital. ns.

1868 Beatty, Thomas Carlyle, Seaham, Sunderland. ns.

1868 Bell, The Rev. David, M.D., M.A., The Vicarage, Goole, Yorkshire. ||, c 3.

1867 Bell, H. Royes, F.R.C.S., 44, Harley-street, W., Surgeon to King's College Hospital. || 5, ‡ 9, c 3, s, vp, sm (*Librarian*).

1872 Bell, John H., M.D., Northampton. ns.

1878 Benton, Samuel, 2, Bennett-street, St. James, S.W., Surgeon to the Farringdon Dispensary.

1862 Berkart, J. I. B., M.R.C.P., 71, Wimpole-street, W., Assistant Physician to the City of London Hospital for Diseases of the Chest.

Elected

1873 Beveridge, J. Spowart, M.R.C.P. Ed., 15, Palace-gardens-terrace, Kensington, W.

1879 Bindon, W. J. Vereker, M.D., F.R.C.S. Edin., 2, Elm-villas, Kilburn, N.W. ‡.

1868 Bird, Geo., M.D., 49, Welbeck-street.

1850 *Birkett, John, F.R.C.S., 59, Green-street, Grosvenor-square, W., Consulting Surgeon to Guy's Hospital. VP, C 6, ‡ 2, ||.

1860 Blower, William, Bedford. NS.

1871 Bloxam, John Astley, F.R.C.S., 8, George-street, Hanover-square, W., Assistant Surgeon to the Charing Cross Hospital; Surgeon to the Lock Hospital. ||, 2, ‡ 4, S 2. (*Councillor.*)

1867 Bond, Thomas, M.B., B.S., F.R.C.S., 17, Delahay-street, S.W., Assistant Surgeon to Westminster Hospital.

1871 Bothwell, G. G., The Strand, Topsham, Exeter. NS.

1879 Bott, Henry, L.R.C.P., Brentford.

1872 Boulton, Percy, M.D., 6, Seymour-street, Portman-square, W., Physician to the Samaritan Hospital (*Councillor*).

1871 Boyd, Robert, M.D., F.R.C.P., 1, Bolton Row, W. ‡ 3.

1868 Brady, John (M.P.), M.D., M.R.C.P., Ely, Cambs.

1868 Braidwood, P.M., M.D., Birkenhead. FM 1877, NS.

1869 Braine, Woodhouse, F.R.C.S., 56, Maddox-street, W., Chloroformist to Charing Cross Hospital and the Dental Hospital. VP 2, S 2, C 3, || 5, ‡ 7, SM.

1878 Brandeis, R. C., M.D. ‡.

1876 Brewer, Alex. Hampton, 201, Queen's-road, Dalston, E.

1873 Bridgwater, Thomas, M.B., Medical Officer of the Harrow Dispensary. ‡.

1863 Broadbent, W. H., M.D., F.R.C.P., 34, Seymour-street, Portman-square, W., Physician to St. Mary's and the London Fever Hospitals; Lecturer on Medicine, St. Mary's Hospital Medical School. ‡ 5, C 4, || 4, LL, VP (*Orator*).

1879 Brookfield, J. S., M.D., Brondesbury, N.W.

1878 Brooks, J. E., Colwyn Bay, North Wales.

1878 Brown, Andrew, L.R.C.P., Elton-villa, 1, Bartholomew-road, Kentish Town, N.W.

1871 Brown, John, Claremont-villa, Falcon-road, Clapham Junction, S.W.

1871 Browne, J. Crichton, M.D., 7, Cumberland-terrace, Regent's-park, N.W., Lord Chancellor's Visitor. C.

1873 Browne, Lennox, F.R.C.S. Ed., 36, Weymouth-street, W., Senior Surgeon to the Central London Throat and Ear Hospital; Aural Surgeon to the Royal Society of Musicians. ‡ 5, || 2.

1873 Brunjes, Martin, 27, Edgware Road, W. ‡ 2.

1862 Brunton, John, M.A., M.D., 21, Euston-road, N.W., Examiner in Midwifery and Forensic Medicine he University of Glasgow; Surgeon to the Royal Maternity Charity. C, ‡ 6, || 2.

Elected

1874 **Brunton, T. Lauder**, M.D., F.R.C.P., F.R.S., 50, Welbeck-street, W., Assistant Physician to, and Lecturer on Materia Medica at, St. Bartholomew's Hospital; Examiner in Materia Medica at the University of Edinburgh. ‡ 3 (*Councillor*).

1850 **Bryant, Thomas**, F.R.C.S., 53, Upper Brook-street, W., Surgeon to, and Lecturer on Surgery at, Guy's Hospital. p, vp 2, s 2, c 4, ll, ‡ 13, ‖ 3 (*Councillor*).

1848 **Bryant, Walter J.**, F.R.C.S., 23a, Sussex-square, Hyde-park-gardens, W. ‖ 3, ‡ 3.

1858 **Buchanan, George**, M.D., F.R.C.P., 24, Nottingham-place, Regent's-park; Assistant Medical Officer to the Local Government Board. p, c 3, ll, vp, ‡ 5, ‖ 2, o.

1868 **Buckle, Fleetwood**, M.D., H.M.S. *Alexandra*. ns.

1876 **Bucknill, John Charles**, M.D., F.R.C.P., F.R.S., 39, Wimpole-street, W.

1873 **Bunny, Joseph**, M.D., Newbury, Berks.

1872 **Burger, Alex.**, M.D., 43, Finsbury Circus, Honorary Surgeon to the German Hospital.

1860 **Burnie, Wm.**, M.D., Bradford. ‖ 2. ns.

1872 **Byas, Edward**, Grove Hall, Bow, E.

1860 **Camps, Wm.**, M.D., Castle Camps, Cambs. c 5, ‡ 17.

1839 **Canton, Edwin**, F.R.C.S. (fm. 1857), 30, Montague-place, Russell-square, W.C., Consulting Surgeon to Charing Cross Hospital; Surgeon to the British Museum. p. vp 2, c 6, ll, s, o, ‡ 12, ‖.

1870 **Carpenter, Alfred**, M.D., Duppa's Hurst, Croydon. o, ‖, c 3, ‡.

1871 **Carter, R. Brudenell**, F.R.C.S., 69, Wimpole Street, W., Ophthalmic Surgeon to, and Lecturer on Ophthalmic Surgery at, St. George's Hospital. o, ‡ 5, ‖ 2.

1848 **Cartwright, S.**, F.R.C.S., 32, Old Burlington-street, W., late Professor of Dental Surgery and Surgeon-Dentist to King's College Hospital, London; Consulting Surgeon to the Dental Hospital of London. ‡ 10.

1876 **Cartwright, S. Hamilton**, 32, Old Burlington-street, W., Professor of Dental Surgery at King's College and Dental Surgeon to the Hospital; Lecturer on Dental Surgery at the London School of Dental Surgery. ‡.

1878 **Cassidy, J. L.**, M.D., 82, Guildford-street, W.C.

1876 **Cathcart, Samuel**, Prudhoe House, High-road, Tottenham, E.

1865 **Chambers, Thos.**, F.R.C.P. Ed., F.R.C.S., 64, Chester-square, S.W., Senior Physician to the Chelsea Hospital for Women; Consulting Physician-Accoucheur to the Western Dispensary, Westminster. ‖ 2.

1867 **Chapman, John**, M.D., 212, Rue de Rivoli, Paris. ‡ 2. ns.

1872 **Charlsley, W. P.**, M.D., Inspector-General of Hospitals, Island of Ceylon. ns.

Elected

1868 CHESSALL, WILLIAM, M.D., Horley, Surrey. NS.

1868 CHILD, EDWIN, New Malden and Coombe, Surrey. ‡ 6, ‖ 2. NS.

1877 *CHISHOLM, Edwin, M.D., Camden, Australia.

1861 CHOLMELEY, W., M.D., F.R.C.P., 63, Grosvenor-street, W., Physician to the Great Northern Hospital; Consulting Physician to the Margaret-street Infirmary for Consumption. C 5, ‡ 9, SM, O, §, ‖ 3, VP.

1870 CHRISTIE, T. B., M.D., F.R.C.P., Royal India Asylum, Ealing, W. ‖.

1871 CHURTON, THOMAS, M.D., 35, Park-square, Leeds, Physician to the Leeds Public Dispensary and to the Leeds Fever Hospital. ‖, ‡ 2.

1854 CLARK, ANDREW, M.D., F.R.C.P., 16, Cavendish-square, W., Physician to, and Lecturer on Clinical Medicine at, the London Hospital; Consulting Physician to the East London Hospital for Children. P, VP, C 5, LL, § 6, ‖ 5.

1875 CLARK, ANDREW, F.R.C.S., 19, Cavendish-place, W., Assistant Surgeon at, and Surgeon to the Throat and Ear Department, Middlesex Hospital.

1873 CLARKE, T. KILNER, M.A., M.D., 63, John William-street, Huddersfield, Surgeon to Huddersfield Infirmary.

1870 CLOUSTON, T. S., M.D., F.R.C.P. (FM 1870), Superintendent Royal Asylum, Edinburgh. NS.

1874 CLOVER, J. T., F.R.C.S., 3, Cavendish-place W., Chloroformist to the Dental Hospital. ‖.

1873 CLUBBE, W. H., Lowestoft, Surgeon to the Lowestoft Infirmary.

1869 COATES, WILLIAM MARTIN, Salisbury, Surgeon to the Salisbury Infirmary. NS.

1849 COCKLE, JOHN, M.A., M.D., F.R.C.P., 4, Suffolk-place, W., and West Moulsey Lodge, Surrey; Physician to the Royal Free Hospital. VP, C 2, L 3, ‡ 6, SM, ‖, O (*President*).

1848 COGSWELL, C., M.D., F.L.S., 47, York-terrace, Regent's-park, N.W. S 4, ‡ 8, ‖ 3 (*Trustee*).

1867 COLES, GEORGE CHARLES, 20, Great Coram-street, Russell-square, W.C. ‡ 6, ‖ 3, C 1 (*Councillor*).

1872 COLES, J. OAKLEY, L.D.S.R.C.S., 18, Wimpole-street, W., Lecturer on Dental Surgery at the National Dental College; Dental Surgeon to the National Dental Hospital and to the Hospital for Diseases of the Throat. ‡ 5.

1853 COLLAMBELL, C., F.R.C.S., The Terrace, 148, Lambeth-road, S. ‡ 2, ‖ 2.

1870 COLLIE, ALEXANDER, M.D., Medical Officer to the Fever Hospital, Homerton, E. ‡.

1871 COOK, JOHN, M.D., 3, Upper Wimpole-street, W., Physician to the Great Northern Hospital. ‡ 3.

1863 COOPER, ALFRED, F.R.C.S., 9, Henrietta-street, Cavendish-square, W., Surgeon to the West London Hospital and to Lock Hospital; Assistant Surgeon to Mark's Hospital for Fistula. ‖ 3, C 3, ‡ 7.

1873 COOPER, Sir HENRY, Kt., M.D., F.R.C.P., 56, Park-street, Hull, Consulting Physician to the Hull General Infirmary. C 2.

Elected
1872 **Corfield, W. H.**, M.A., M.D., F.R.C.P., 10, Belton-row, Mayfair, Professor of Hygiene, &c., University College, London; Medical Officer of Health for St. George's, Hanover-square. ‖ 2, ‡ 2, c.
1861 **Coulson, Walter J.**, F.R.C.S., 17, Harley-street, W., Surgeon to the Lock Hospital and St. Peter's Hospital for Stone. o, s 2, c 3, ‡ 7.
1879 **Coupland, Sydney**, M.D., 7, Nottingham-place, W., Lecturer on Pathological Anatomy at Middlesex Hospital Medical College; Assistant Physician to, and Pathologist at, Middlesex Hospital.
1874 **Craigie, J. H.**, 13, Portland-place, W., Surgeon Dentist to Chelsea Hospital for Women. ‡.
1873 **Craven, R. Martin**, 14, Albion-street, Hull, Surgeon to the Hull General Infirmary.
1833 **Crisp, Edwards**, M.D., 16, Beaufort-street, Chelsea, S.W. sm fm 1872, c, § 3, ‡ 3.
1872 **Crombie, John M.**, M.A., M.B., 62, College-street, South Kensington, S.W.
1855 **Cross, R.**, M.D., F.R.C.P. Edin,, 42, Craven-street, Strand, W.
1874 **Cumberbatch, A. E.**, M.B., F.R.C.S., 17, Queen Anne-street, W., Aural Surgeon to the Great Northern Hospital. ‖ 2, ‡ (*Councillor*).

1871 **Dalby, Wm. Bartlett**, B.A., M.B., F.R.C.S., 18, Savile-row, W., Aural Surgeon to, and Lecturer on Aural Surgery at, St. George's Hospital. ‡ 2, c.
1865 **Dale, G. C.**, M.D., F.R.C.S., Ivy Lodge, Upper Tooting, S.W. ‖, ‡.
1873 **Daly, Owen**, M.D., F.R.C.P., 23, Albion-street, Hull, Physician to the Hull General Infirmary.
1831 **Davidson, Thomas**, M.D., Shaftesbury House, Bayswater, W. vp 2, c 5, sm, ‡, § 20.
1879 **D'Avignon, F. F.**, M.D., 1305, Washington-avenue, St. Louis, Mass., U.S.A.
1868 **Davy, Richard**, F.R.C.S., 33, Welbeck-street, W., Surgeon to, and Lecturer on Surgery at, the Westminster Hospital. vp, s 2, sm, ‡ 5, § 2.
1871 **Day, Henry**, M.D., F.R.C.P., Stafford, Physician to the Stafford County Infirmary. ns, sm.
1867 **Day, Wm. Henry**, M.D., 10, Manchester-square, W., Physician to the Samaritan Free Hospital for Women and Children. ‖ 5, ‡ 8, c 3 (*Chairman of Council*).
1871 **De Renzy, A. C. C.**, Deputy Surgeon-General, Bengal Army.
1879 **Dewar, John**, 132, Sloane-street, S.W.
1844 **Diamond, Hugh, W.**, MD., Twickenham House, Twickenham, Middlesex. ‡ 3.
1868 **Dick, Henry**, M.D., 59, Wimpole-street, W.
1871 **Dickinson, James C.**, The Grove, Horley.
1872 **Down, J. Langdon H.**, M.D., F.R.C.P., 39, Welbeck-street, W., and Normansfield, Hampton Wick, Physician to the London Hospital. ‖ 2.

Elected

1871 Dowse, Thomas S., M.D., F.R.C.P. Ed., 2, Old Burlington-street, W., Physician to the North London Hospital for Consumption. ‡ 3 (*Hon. Sec. for Foreign Correspondence*).

1877 Drew, J. H., 2, Cambridge-terrace, Hyde-park, W. ‡.

1874 Drysdale, C. R., M.D., 17, Woburn-place, W.C., Senior Physician to the North London Hospital for Consumption; Senior Physician to the Metropolitan Free Hospital.

1848 Duncan, James, M.B., 8, Henrietta-street, Covent-garden, W.C. ‡, || 4.

1878 Duncan, Jas. Matthews, A.M., M.D. Aberd., F.R.S., F.R.C.P. Edin., 71, Brook-street, W., Physician-Accoucheur to, and Lecturer on Midwifery at, St. Bartholomew's Hospital. ‡ 2.

1874 Duncan, B. Arcedeckne, M.D., Gower House, 88, Gower-street, W.C. ||.

1857 Dunn, R. W., 13, Surrey-street, Strand, W.C. ‡ 6, c 3, || 2.

1848 Du Pasquier, C. F., F.R.C.S., 62, Pall Mall, Surgeon Apothecary to Her Majesty; Apothecary in Ordinary to Her Majesty's Household; Surgeon Apothecary to H.R.H. The Prince of Wales's Household, &c. ‡ 2, ||, c 3.

1873 Duranty, E. Nicholas, M.D., Marseilles. NS.

1873 Durham, Arthur E., F.R.C.S., 82, Brook-street, W., Surgeon to, and Lecturer on Surgery at, Guy's Hospital. ‡ 3, c.

1865 Ebsworth, Alfred, F.R.C.S., 5, Henrietta-street, Covent-garden, W.C. ‡.

1878 Edis, Arthur Wellesley, M.D., F.R.C.P., 22, Wimpole-street, W., Assistant Obstetric Physician to the Middlesex Hospital. ‡.

1860 Edmunds, J., M.D., 8, Grafton-street, W., Physician to the London Temperance Hospital; Medical Officer of Health and Public Analyst for St. James's, London. ‡ 7, || 2.

1868 Elliott, Geo. F., M.D., Hull, Physician to the Hull General Infirmary. NS.

1872 Ellis, James, Calcutta. NS.

1877 Ewart, William, M.B., 33, Curzon-street, Mayfair, W.

1869 Farquharson, R., M.D., F.R.C.P., 23, Brook-street, Grosvenor-square, W., Physician to the Belgrave Hospital for Children; Assistant Physician to, and Lecturer on Materia Medica at, St. Mary's Hospital. c, || 3, ‡ 6.

1872 Fayrer, Sir Joseph, K.C.S.I., M.D., F.R.C.P., 16, Granville-place, Portman-square. W., Honorary Physician to H.M. the Queen and H.R.H. the Prince of Wales; Physician to H.R.H. the Duke of Edinburgh. ‡ 5, || 2 (*Vice-President*).

1878 Field, George P., 31, Lower Seymour-street, Portman-square, W., Aural Surgeon to St. Mary's Hospital and Lecturer on Aural Surgery in St. Mary's Medical School. ‡.

1847 Field, Wm., The Hyde, Kingsbury House, Middlesex. ‡ 8, || 2.

1876 Fisher, Frederic R., F.R.C.S., 79, Grosvenor-street, W., Surgeon to the National Orthopædic Hospital. ‡

Elected

1868 **Fletcher, Thomas Bell**, M.D., F.R.C.P., 43, Clarendon-square, Leamington, Consulting Physician to the Birmingham General Hospital. ns. ‡.

1868 **Folker, William Henry**, F.R.C.S., Hanley, Staffordshire, Surgeon to the North Stafford Infirmary. ns.

1873 **Foss, R. W.**, M.D., Stockton-on-Tees, Honorary Medical Officer to the Stockton Surgical Hospital.

1869 **Foster, Balthazar W.**, M.D., F.R.C.P., 16, Temple-row, Birmingham, Physician to the General Hospital, Birmingham. ns.

1872 **Fothergill, J. Milner**, M.D., 23, Somerset-street, W., Assistant Physician to the West London Hospital and to the Victoria-park Chest Hospital. || 2, c.

1878 **Foulds, Samuel**, L.R.C.P., Chesterfield, Surgeon to the Chesterfield and North Derbyshire Hospital.

1878 ***Foumartin, Henry de**, M.D. (Paris), Seamen's Hospital, Greenwich, S.E.

1873 **Fox, A. E. W.**, M.B., 16, Gay-street, Bath, Physician to the Eastern Dispensary, Bath.

1868 **Fox, Charles Henry**, M.D., Brislington House, near Bristol. ns.

1871 **Fox, Francis**, 40, Ladbroke-grove-road, Notting-hill, W. || 2.

1868 **Fox, John M.**, The Grove, Lymm, Cheshire. ns.

1879 **Fox, Thomas Colcott**, M.B., 14, Harley-street, W., Physician to St. George and St. James's Dispensary.

1869 **Frampton, Thomas**, 62, Gloucester-terrace, Hyde-park. ||.

1868 **Freer, Alfred**, Stourbridge. ns.

1868 **Gaine, Charles**, 8, Edgar-buildings, Bath, Dental Surgeon to the Royal United Hospital. ns.

1862 **Gant, F. J.**, F.R.C.S., 16, Connaught-square, W., Surgeon to the Royal Free Hospital. || 2, ‡ 6, ll, o, c 3, vp 2.

1847 **Garrod, Alfred B.**, M.D., F.R.C.P., F.R.S., 10, Harley-street, W., Consulting Physician to King's College Hospital. p, vp 2, c 9, o, ll, ‡ 2.

1849 **Gay, John**, F.R.C.S., 10, Finsbury-place South, E.C., Senior Surgeon to the Great Northern Hospital; Consulting Surgeon to the Soldiers' Daughters' Home, to the Earlswood Asylum, the North London and Metropolitan Railways, and to the National Provident and the Provident Clerks' Assurance Offices. p, vp, ll, c 3, o, † 6, ‡ 9, || 4.

1873 **Gee, Robert**, M.D., 5, Abercromby-square, Liverpool, Consulting Physician to the Hospital for Diseases of Chest, Liverpool.

1878 **Gell, Thomas Sylvester**, M.D., St. John's Lodge, Kensal-green, W.

1856 **Gibbon, S.**, A.B., M.B., 39, Oxford-terrace, W. ‡ 2.

1867 **Gill, William**, 11, Russell-square, W.C. ‡ 2.

1871 **Glynn, T. R.**, M.B., Liverpool, Physician to the Royal Infirmary, Liverpool. ns.

1857 **Godfrey, John**, M.D., F.R.C.P. Edin., North-gate, Regent's-park, N.W.

Elected

1877 **Godfrey, Robert Frederick**, M.D., 1360, St. Catherine-street, Montreal, Canada.

1867 **Godson, Clement**, M.D., 8, Upper Brook-street, Grosvenor-square, W., Assistant Physician-Accoucheur to St. Bartholomew's Hospital. c 3, ‡ 8, || 6 (*Vice-President*).

1872 **Godson, Charles**, F.R.C.S., 1, Astwood-road, Cromwell-road, S.W. || 3, ‡ 3.

1869 **Goodman, Charles Rowland**, M.D., 24, Gloucester-road, Birkdale, Southport. ns.

1873 **Goodsall, D. H.**, F.R.C.S., 7, Portland-place, W., Surgeon to the Metropolitan Free Hospital; Assistant Surgeon to St. Mark's Hospital. ‡ 4 (*Hon. Secretary*).

1878 **Gould, Alfred Pearce**, M.S. Lond., F.R.C.S., 16, Queen Anne-street, W., Assistant Surgeon to, and Lecturer on Anatomy at, the Westminster Hospital.

1876 **Gowers, William Richard**, M.D., F.R.C.P., 50, Queen Anne-street, W., Assistant Physician to, and Teacher of Clinical Medicine at, University College Hospital; Assistant Physician to the National Hospital for the Paralysed and Epileptic.

1874 **Gowlland, P. Y.**, F.R.C.S., 34, Finsbury-square, E.C., Senior Surgeon to St. Mark's Hospital.

1867 **Grasemann, C. Edward**, M.D., 46, Albany-street, Regent's-park, N.W. || 3.

1872 **Gray, Robert**, Indian Medical Service. ns.

1843 ***Greenhalgh, Robert**, M.D., 72, Grosvenor-street, W., Consulting Physician to the City of London Lying-in and Samaritan Hospitals; late Physician-Accoucheur and Lecturer on Midwifery and the Diseases of Women and Children, St. Bartholomew's Hospital. p, vp, o, c 5, s 3, ‡ 5.

1868 **Gregson, Geo.**, 63, Harley-street, Dental Surgeon to the Dental Hospital of London. ‡ 4, || 3.

1873 **Grieve, Robert**, M.D., New Amsterdam, B. Guiana.

1875 **Griffith, G. de Gorrequer**, 9, Lupus-street, Belgravia, S.W., Senior Physician to the Hospital for Women and Children, Pimlico. ‡.

1873. **Grindrod, R. B.**, M.D., Carlsruhe Wych, Great Malvern.

1859 **Habershon, S. O.**, M.D., F.R.C.P., 70, Brook-street, Senior Physician to Guy's Hospital. p, c 3, o, ‡ 6, || 2, ll.

1869 **Haden, W. H.**, M.D., 66, Harley-street. ||, ‡.

1874 ***Hall, F. de Havilland**, M.D., 46, Queen Anne-street, W., Assistant Physician to, and Physician in charge of the Throat Department at, the Westminster Hospital. ‡ 3 (*Hon. Secretary*).

1871 **Hamilton, Robert**, M.D. Cantab. ||, ‡. (Travelling.)

1878 **Hamilton, J. Lawrence**, L.R.C.P., Edin., 34, Gloucester-terrace, Hyde-park, W.

Elected

1834 **Harding, Wm.**, F.R.C.S., 4, Percy-street, Bedford-square, W.C. vp 2, c 3, ‡ 5, ||.

1875 **Hardwicke, Herbert Junius**, M.D., F.R.C.S., Parkfield House, Sheffield.

1873 **Hardwicke, Junius**, F.R.C.S., Rotherham, Senior Consulting Surgeon to the Rotherham Infirmary.

1850 ***Hare, Charles J.**, M.D., F.R.C.P., Hon. Fellow, *q. v.*

1865 **Harper, Philip H.**, F.R.C.S., 30, Cambridge-street, Hyde-park, W. ‡.

1871 **Harris, Charles James**, 11, Kilburn Priory, N.W. || 3.

1872 **Harris, Henry**, M.D., F.R.C.S., Trengweath, Redruth, Cornwall. || 2, 3 ‡. ns.

1879 **Harris, Vincent Dormer**, M.D., 23, Upper Berkeley-street, W., Demonstrator of Physiology at St. Bartholomew's Hospital; Junior Physician West London Hospital.

1873 **Harris, Wm. John**, 13, Marine Parade, Worthing, Senior Medical Officer to the Worthing Infirmary. || 2, ‡ 4.

1851 **Harrison, C. H. Rogers**, F,R.C.S, Vine House, 55, Stockwell-road, S.W., Consulting Surgeon to St. Pancras Infirmary; Honorary Surgeon to the Brixton and Stockwell Dispensary. vp 2, c 3, s 5, t 6, sm, † 21, || (*Trustee*).

1871 **Harrison, Reginald**, F.R.C.S., Liverpool, Surgeon to the Royal Infirmary. ns.

1865 **Harvey, J. A.**, 35, Princes-square, Bayswater, W.

1875 **Hastings, George**, M.D., 47, Kensington-park-gardens, W.

1852 **Haward, Edwin**, M.D., 9, Harley-street, W., Physician to the North London Consumption Hospital. ‡ 4.

1852 **Hawksley, Thomas**, M.D., 31, Grosvenor-street, Grosvenor-square, Consulting Physician to the Margaret-street Infirmary for Consumption. c 5, ‡ 2, ||.

1872 **Hazel, George**, 71, Oakley-square, N.W. || 2, ‡.

1869 **Heaton, John Deakin**, M.D., F.R.C.P., Leeds, Senior Physician to the Leeds General Infirmary. ‡, || 4. c, ns,

1871 **Hemming, W. B.**, 26, Notting-hill-terrace, W., Consulting Surgeon to the Notting-hill and Shepherd's-bush Dispensary. ‡, || 2.

1876 **Hemming, W. Douglas**, Glenalmond, Dean Park, Bournemouth.

1853 **Henry, A.**, M.D., 57, Doughty-street, W.C. c 7, ‡ 4.

1878 **Henry, Louis**, M.D., Melbourne, Australia.

1879 **Heron, G. A.**, M.D., 40, Margaret-street, W., Assistant Physician City of London Hospital for Diseases of the Chest. ‡

1876 **Heycock, F. R.**, M.D., F.R.C.S., 16a, Old Cavendish-street, W., Assistant Surgeon to St. Peter's Hospital. ‡ 2.

1872 **Hicks, John Braxton**, M.D., F.R.C.P., F.R.S., 24, George-street, Hanover-square, Physician-Accoucheur and Lecturer on Midwifery and Diseases of Women and Children, Guy's Hospital. || 2, ‡ 3. c.

1867 **Hill, Thos. Harvey**, 4, Stanhope-terrace, Bayswater. || 5, c 3, ‡ 10 (*Treasurer*).

Elected

1840 HIRD, FRANCIS, F.R.C.S., 13, Old Burlington-street, W., Surgeon to Charing Cross Hospital. P 2, VP 6, C 12, LL, O 2, ‡ 20 (*Trustee*).

1877 HOAR, WILLIAM, Maidstone, Consulting Surgeon to the West Kent General Hospital.

1873 HOBSON, W. H., Great Berkhamstead, Herts, Honorary Surgeon to the West Herts Infirmary.

1873 HODGE, B. TERRY, Sidmouth, Devon.

1879 HOGG, ARTHUR JOHN, Netley Villas, Ealing, W.

1848 HOGG, JABEZ, 1, Bedford-square, W.C., Consulting Surgeon to the Royal Westminster Ophthalmic Hospital. VP, C 2, ‡ 9, || 2.

1868 HOLMAN, CONSTANTINE, M.D., Reigate. ‡ 5, || 2.

1875 HOPE, WILLIAM, M.D., 56, Curzon-street, Mayfair, W., Senior Physician to Queen Charlotte's Lying-in Hospital, and Physician to Belgrave Hospital for Children.

1865 HUME, F. H., 53, Devonshire-street, Islington, N. ‡.

1833 HUTCHINSON, F., F.R.C.S., 29, Woburn-place, Russell-square, W.C. C 13, ‡ 9.

1874 HUTCHINSON, S. J., 44, Brook-street, W., Assistant Surgeon Dental Hospital.

1869 IRWIN, W. C., M.D., Leicester. NS.

1879 JACKSON, ERNEST CARR, 91, Harley-street, W., Surgeon National Orthopædic Hospital.

1868 JACKSON, J. HUGHLINGS, M.D., F.R.C.P., F.R.S., 3, Manchester-square, W., Physician to the London Hospital and to the Hospital for Epilepsy and Paralysis. O, C 2.

1853 JACKSON, R., M.D., 53, Notting-hill-square, W.

1875 JAGIELSKI, VICTOR APOLLINARIS, M.D., M.R.C.P. Lond., 20, Weymouth-street, Portland-place, W., Honorary Physician to the Infirmary for Consumption. ‡ 2.

1856 JEPHSON, J. H., M.D., 20, Warwick-gardens, Kensington, W., late Physician to the Great Northern Hospital. C 2, ‡ 4.

1873 JOHNSON, J. S., High-street, Croydon, Surgeon to the Croydon Dispensary.

1875 JONES, SYDNEY, M.B., F.R.C.S., 16, George-street, Hanover-square, W., Senior Surgeon to, and Lecturer on Surgery at, St. Thomas's Hospital. ‡.

1875 JONES, WALTER, M.D., 45, Finsbury-square, E.C.

1876 JULER, H. E., Resident Registrar to St. Mary's Hospital, Paddington, W.

1874 KAVANAGH, PATRICK, M.D., Lorne House, Wickham-road, Lewisham-road, S.E.

1874 KEENE, JAMES, F.R.C.S., 59, Brook-street, W., Aural Surgeon to, and Lecturer on Aural Surgery at, the Westminster Hospital Medical School. ‡

1847 KELLOCK, W. BERRY, F.R.C.S., Stamford-hill, N. || 2, ‡.

1873 KEMPTHORNE, JOHN, F.R.C.S., Callington, Cornwall.

Elected

1876 Key, A. C., 30, Wilton-place, S.W. ‡ 2.

1866 King, M. Kelburne, M.D, F.R.C.S., Hull, Surgeon to the Hull General Infirmary. nl.

1868 Kirkman, Wm. P., M.D., St. Leonard's-on-Sea. ‖ 2, ‡ 2. ns.

1868 Knaggs, Samuel, Huddersfield, Surgeon to the Huddersfield and Upper Agbrigg Infirmary. 3, ‡. ns.

1875 Knox, John, M.D., Resident Medical Officer, Bethnal House, E.

1868 Lake, W. C., M.D., Teignmouth, Devon, Surgeon to the Teignmouth Infirmary. ‡ 4, ‖. ns.

1875 Lattey, James, 23, St. Mary Abbot's-terrace, Kensington, W.

1858 Lawson, George, F.R.C.S., 12, Harley-street, W., Surgeon to the Royal London Ophthalmic Hospital; Surgeon to, and Lecturer on Surgery at, the Middlesex Hospital. vp 2, c 3, ‡ 4.

1853 Leared, Arthur, M.D., F.R.C.P., 12, Old Burlington-street, W., Senior Physician to the Great Northern Hospital. c 3, o, ‡ 6, ‖ 2.

1875 Lee, E. Samuel, Assistant Medical Officer, Fever Hospital, Stockwell, S.W.

1869 Lee, C. A. M.D., Surgeon, R.N. ns.

1873 Lee, R. J., M.A., M.D., 6, Savile-row, W., Assistant Physician to the Hospital for Sick Children. ‡ 4, c.

1858 Lemon, Oliver, Langley-hill House, Kings Langley, Herts. ‖.

1876 Lewis, Louis, M.D., 73, Albert-street, Regent's-park, N.W. ‡.

1867 Lichtenberg, George, M.D., 47, Finsbury-square, Surgeon to the German Hospital. ‖ 4, ‡, c 2.

1874 Liebreich, Richard, 16, Albemarle-street, W., Consulting Ophthalmic Surgeon to St. Thomas's Hospital.

1869 Lipscomb, John T. N., M.D., F.R.C.S., St. Albans, Herts. ns.

1878 Lister, Joseph, F.R.S., M.B., F.R.C.S., 12, Park Crescent, Portland-place Professor of Clinical Surgery King's College; Surgeon to King's College Hospital. ‡.

1870 Lloyd, Ridgway R. C. C., St. Albans. ns.

1878 Lockwood, C. B., The Lock Hospital, Dean-street, W.

1873 Loe, J. S., 147, Woodhouse-lane, Leeds, Surgeon to the Leeds Fever Hospital. ‖ 2, ‡.

1878 Louis, Henry M., Melbourne, Australia.

1878 Lovejoy, W. H., M.D., 8, Portman-street, W.,

1868 Lowe, John, M.D., Kings Lynn, Medical Attendant to their Royal Highnesses the Prince and Princess of Wales at Sandringham; Consulting Surgeon to the West Norfolk and Lynn Hospital. ns. (*Councillor*).

1868 Lucas, T. P., 43, Bank-street, East Emerald-hill, Melbourne, Australia.

1868 Lund, Edward, F.R.C.S., Manchester, Surgeon to the Manchester Royal Infirmary; Professor of Surgery at Owens College, †. ns.

1869 Lunn, Wm. J., M.D., Hull, Senior Surgeon to the Hull General Infirmary. ns.

Elected.

1871 **Mac Cormac, William**, M.A., F.R.C.S., 13, Harley-street, W., Surgeon to, and Lecturer on Surgery at, St. Thomas's Hospital. ‖, ‡, o 3.

1862 **Mackenzie, Morell**, M.D., 19 Harley-street, W., Physician to the Hospital for Diseases of the Throat; Lecturer on Diseases of the Throat at the London Hospital. ‡ 2, ‖.

1868 **Mackinder, Draper**, M.D., Gainsborough. NS.

1861 **MacLaren, A. C.**, 60, Harley-street, W. ‖ 2, ‡ 5.

1865 **Macpherson, J.**, M.A., M.D., 35, Curzon-street, Mayfair, W., Physician to the Scottish Hospital. ‖ 4, ‡ 2,

1869 **Magill, M.**, M.D., F.R.C.S., Staff-Surgeon H.M.S. "Orontes." ‡ 2. NS.

1878 **Mair, Robert Slater**, M.D., 28, Ledbury-road, Bayswater, W.

1879 **Major, George William**, B.A., M.D., Montreal, Canada.

1873 **Mansfield, Pierce**, M.D. Staff-Surgeon, R.N., 14, Surrey-villas, Upper Norwood.

1876 **Manville, B. E.**, 5, Grosvenor-street, W.

1868 **Marsh, John C. Lory**, M.D., Greenhithe, Kent. ‡. NS.

1873 **Marshall, Edward**, Church House, Mitcham, Surrey.

1859 **Marshall, James**, M.D., Aberdeen. NS.

1869 **Marshall, William**, M.D., Mortlake, Surrey.

1865 **Marshall, W. G.**, F.R.C.S., Medical Superintendent Female Department, Asylum, Colney Hatch, Middlesex. ‖ 3, ‡ 5.

1873 **Martin, Adam Rae**, "The Precincts," Rochester, late Surgeon to St. Bartholomew's Hospital, Chatham. ‡.

1871 **Martland, W.**, Blackburn, Senior Surgeon Blackburn Infirmary. NS.

1862 **Mason, Francis**, F.R.C.S., 5, Brook-street, Grosvenor-square, Surgeon to, and Lecturer on Anatomy at, St. Thomas's Hospital. VP, o 4, ‡ 9. SM, O, S 2, ‖ 6 (*Chairman of Council*).

1869 ***Mathews, Robert**, Bickley, Kent. ‖ 2. NS.

1871 **Maurice, Oliver C.**, Reading. NS.

1851 **May, W. Costall**, 52, Tregunter-road, South Kensington. ‡ 4, ‖ 3.

1862 **Maybury, A. K.**, M.D., Richmond, Surrey. Consulting Physician, Richmond Infirmary. NS.

1869 **McDonagh, James A.**, F.R.C.S., Mornington Villa, 211, Hampstead-road, N.W. ‖.

1869 **McHardy, Malcolm M.**, F.R.C.S., 5, Savile-row, W., Surgeon to the Royal South London Ophthalmic Hospital.

1868 **McIntyre, J.**, M.D., Odiham, Hants. ‡. NS.

1865 **McOscar, John**, M.D., 4, Argyll-street, Regent-street, W. ‡.

1866 **Meredyth, Colomiati A. W. L.**, M.D., 10, George-street, Hanover-square, W. ‡.

1873 **Méric, Henry de**, 52, Brook-street, W., Assistant Surgeon to the French Hospital. ‡ 2.

1873 **Merryweather, Henry**, M.D., 17, Howard-street, Sheffield, Lecturer on Dental Surgery at the Sheffield School of Medicine.

1865 **Middlemist, R. P.**, 10, Bedford-place, Russell-square, W.C. ‡ 3, ‖ 3.

Elected

1858 **MILLAR, JOHN**, Medical Superintendent to the Bethnal House Asylum, E. ‡ 8, || 3.

1859 **MILLER, WILLIAM**, 15, Duke-street, St. James's, S.W. ‡ 4.

1878 **MILNER, EDWARD**, 32, New Cavendish-street, W., Surgeon to the Lock Hospital. ‡.

1877 **MONCKTON, MARSHALL**, Calverley Parade, Tunbridge Wells. ‡ 2.

1860 **MONTEFIORE, N.**, F.R.C.S., 18, Portman-square, W. ‡ 5, || 4.

1875 **MOORE, JOSEPH**, M.D., Balham. ‡.

1871 **MORLEY, ALEXANDER**, 42, Albemarle-street, W. || 4, ‡ 4.

1878 **MORRIS, MALCOLM A**, 63, Montagu-square, W.

1878 **MUMFORD, W. L.**, M.D., 1, Bartlett's-passage, Holborn, E.C.

1868 **MURRAY, JOHN CARRICK**, M.D., Newcastle-on-Tyne. NS.

1868 **MURRAY, J. JARDINE**, F.R.C.S. Edin., Brighton, Consulting Surgeon to the Sussex and Brighton Infirmary for Diseases of the Eye. ‡. NS.

1873 **MYERS, H. R.**, 30, Euston-square, N.W.

1868 **NANKIVELL, CHARLES B.**, M.D., Torquay, Senior Physician to the Consumption Hospital, Torquay. NS.

1870 **NAPIER, WILLIAM DONALD**, 22, George-street, Hanover-square, W. || 5. ‡ 5.

1877 **NESBITT, DAWSON**, M.D., 34, Cambridge-place, Hyde-park, W.

1868 **NEVINS, BIRKBECK J.**, M.D., Liverpool, Consulting Surgeon to the Ear and Eye Infirmary. ‡. NS.

1876 **NEWHAM, JAMES**, 16, Princes-street, Cavendish-square, W. ‡.

1871 **NICHOLLS, JOHN F.**, M.D., Devizes. NS.

1868 **NOBLE, DANIEL**, M.A., M.D., F.R.C.P., Manchester. NS.

1871 **OGLE, WILLIAM**, M.A., M.D., F.R.C.P., Derby, Physician to the Derbyshire General Infirmary. NS.

1873 **OGSTON, ALEXANDER**, M.D., 252, Union-street, Aberdeen, Surgeon to the Aberdeen Royal Infirmary. NS.

1872 **OGSTON, FRANCIS**, M.D., 156, Union-street, Aberdeen, Professor of Medical Logic and Jurisprudence to the University of Aberdeen. NS.

1875 **ORD, WILLIAM M.**, M.D., F.R.C.P., 7, Brook-street, W., Physician to, and Lecturer on Medicine at, St. Thomas's Hospital. ‡.

1868 **OSBORN, JOHN**, M.D., F.R.C.S., Seafield, Emsworth, Hants. NS.

1878 **OWEN, EDMUND**, M.D. Lond., F.R.C.S., 49, Seymour-street, Portman-square, Assistant Surgeon to St. Mary's Hospital; Lecturer on Anatomy at St. Mary's Medical School.

1873 **OWEN, FRANCIS**, Sunnyside, Leatherhead. ||.

1878 **PAIRMAN, ROBERT**, M.D., Storgursey, Bridgwater.

1877 **PARAMORE, RICHARD**, 18, Hunter-street, W.C.

1867 **PARKINSON, GEORGE**, 50, Brook-street, Grosvenor-square, W. || 2, ‡.

1871 **PARSONS, F. H.**, M.D., Mount Pleasant, Hastings. NS.

Elected

1872 PATTEN, CHARLES A., Medical Officer of Health, Cambridge-villa, Ealing, W

1854 PAUL, J. H., M.D., Camberwell House, Camberwell, S.E. c 6, ‡ 7, || 4.

1854 PAVY, F. W., M.D., F.R.C.P., F.R.S., 35, Grosvenor-street, W., Physician to, and Lecturer on Physiology at, Guy's Hospital, &c. LL, C, VP, ‡.

1871 PEDLER, GEORGE H., 6, Trevor-terrace, Knightsbridge, S.W. ||.

1869 PEMBERTON, OLIVER, F.R.C.S, Birmingham, Surgeon to the Birmingham General Hospital; Professor of Surgery at Queen's College. NS.

1868 PERCIVAL, CHARLES J., M.D., 7A, Manchester-square, W. ||.

1873 PEREZ, DIEGO, M.D., Monte Video.

1871 PERRIGO, JAMES, M.D., Montreal. NS.

1878 PHILIPPS, SUTHERLAND REES, M.D., M.Ch., Medical Superintendent of Wonford House, Exeter.

1869 PHILIPSON, GEORGE H., M.A., M.D., F.R.C.P., Newcastle-on-Tyne, Professor of Medicine, University of Durham. NS.

1873 PHILLIPS, G. R. T., 24, Leinster-square, Hyde-park. ‡, ||.

1876 PHILLIPS, C. D. F., M.D., F.R.C.S. Ed., 2, Grosvenor-square, W. ‡ 2.

1875 PHILPOT, HARVEY J., Cirencester.

1873 PORT, H., M.D., 48, Finsbury-square, E.C., Physician to the German Hospital,

1850 POTTS, WILLIAM, F.R.C.S., 2, Albert Terrace, N.W. c 3, ‡, ||.

1868 POWELL, JOSIAH T., M.D., 347, City-road, E.C.

1871 POWELL, R. DOUGLAS, M.D., F.R.C.P., 15, Henrietta-street, Cavendish-square, W., Physician to the Hospital for Consumption and Diseases of the Chest, Brompton; Assistant Physician at the Middlesex Hospital. c 2, || 3, ‡ 4.

1869 PRICE, WILLIAM PRESTON, M.D., Margate. NS.

1869 PRIOR, C. E., M.D., St. Peter's, Bedford, Coroner and Analyst for Bedford. NS.

1873 PURCELL, F. ALBERT, M.D., 35, Welbeck-street, W., Surgeon to the Cancer Hospital, Brompton.

1879 PURCHAS, THOMAS BESWICK, M.D., 37, North-bank, Regent's-park, N.W. Deputy Inspector General of Hospitals and Fleets.

1878 PYE, WALTER, F.R.C.S., 4, Sackville-street, Piccadilly, W., Assistant Surgeon to St. Mary's Hospital; Lecturer on Physiology at St. Mary's Hospital Medical School. ‡.

1870 QUAIN, RICHARD, M.D., F.R.C.P., F.R.S., 67, Harley-street, W., Consulting Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, &c. c 3, ||.

1869 RADFORD, THOMAS, M.D., F.R.C.S., Manchester, Hon. Consulting Physician to St. Mary's Hospital, Manchester. NS.

1861 RAMSKILL, J. S., M.D. Lond., 5, St. Helen's-place, Bishopsgate-street, E.C., Senior Physician to the Hospital for Paralysis and Epilepsy; Physician to the London Hospital. ‡.

1859 *RAYNER, JOHN, 55, Highbury-quadrant. ‡ 2.

Elected

1851 Read, Reginald, F.R.C.P. Ed., 1, Guilford-place, W.C. c 2.

1850 Rees, G. Owen, M.D., F.R.C.P., F.R.S., 26, Albemarle-street, W., Consulting Physician to Guy's Hospital. VP 2, LL.

1879 Reeves, H. A., F.R.C.S. Edin., 6, Grosvenor-street, W., Assistant Surgeon to, and Teacher of Practical Surgery at, the London Hospital.

1872 Reynolds, J. Russell, M.D., F.R.C.P., F.R.S., 38, Grosvenor-street, W., Physician in Ordinary to H.M.'s Household; Emeritus Professor of the Principles and Practice of Medicine at University College; Consulting Physician to University College Hospital. ‡, c 3.

1872 Richards, J. P., Medical Superintendent, Female Department, County Asylum, Hanwell, W. ‡ 3.

1850 Richardson, Benjamin W., M.A., M.D., LL.D., F.R.S., F.R.C.P. (FM 1854), 12, Hinde-street, Manchester-square, W. P, VP, LL, c 5, o, ‡ 12, || 2.

1872 Ringer, Theobald, Surgeon-Major Bengal Army. NS.

1861 Risdon, R., 2, James-street, Buckingham-gate, S.W. ‡ 6, || 2.

1830 Robarts, H. P., F.R.C.S. (FM 1844), 30, Keppel-street, W.C. VP 2, c 10, s 9, SM, ‡ 7, ||.

1874 Roberts, Frederick Thomas, M.D., F.R.C.P., B.Sc., 53, Harley-street, W., Physician to University College Hospital; Professor of Materia Medica and Therapeutics at University College; and Assistant Physician to the Hospital for Consumption and Diseases of the Chest, Brompton. ‡ 2.

1863 Roberts, A. T., M.D., 32, Buckingham-road, Brighton.

1869 Roberts, Bransby, M.D., Badlesmere House, Eastbourne, Consulting Physician to the Eastbourne Provident Dispensary. ‡. NS.

1868 Roberts, David Lloyd, M.D., F.R.C.P., Manchester, Physician to St. Mary's Hospital, Manchester. NS.

1857 Roberts, D. W., M.D., 56, Manchester-street, W.

1873 Robertson, W. H.; J.P.; M.D., F.R.C.P., Buxton, Derbyshire, Consulting Physician to the Devonshire Hospital and Buxton Bath Charity.

1877 Roeckel, Waldemar Joseph, F.R.C.S., 7, Grosvenor-street, Grosvenor-square, W.

1869 Roden, William, M.D., Kidderminster. NS.

1868 Rogers, Adams M., Surgeon H.M. Bombay Army. NS.

1869 Rogers, C. E. H., Retford, Notts. NS.

1856 Rogers, J., M.D., 33, Dean-street, Soho, W., Visiting Medical Officer to the Westminster Union Infirmary.

1847 Rogers, Wm. Rd., M.D., 56, Berners-street, W., Physician to the Samaritan Free Hospital for Women and Children; Consulting Surgeon to the Hospital for Women and Children, Vincent-square. VP, c 6, ‡ 5.

1868 Rolleston, George, M.D., F.R.S., F.R.C.P., Oxford, Linacre Professor of Anatomy; Honorary Physician to the Radcliffe Infirmary. NS.

1869 Roome, Henry, M.D., Parkhurst, Isle of Wight. NS.

Elected
1874 ROSE, WILLIAM, M.B., F.R.C.S., 21, Welbeck-street, Assistant Surgeon to King's College Hospital; Surgeon to the Royal Free Hospital (*Councillor*).
1876 ROSS, A. C., Rossland House, Denmark-terrace, Brighton.
1876 ROUTH, A. C., 8, Osnaburgh-street, Regent's-park, N.W.
1848 ROUTH, C. H. F., M.D., 52, Montagu-square, W., Physician to the Samaritan Free Hospital, &c. P, VP 2, S 4, C 6, ‡ 11, SM, ‖ 5 (*Trustee*).
1870 SAMS, JOHN SUTTON, Eltham-road, Lee, S.E., Surgeon to the Royal Kent Dispensary.
1869 SANDWELL, EDWARD, 10, Charles-street, Soho-square, W. ‖ 4.
1863 SANSOM, A. E., M.D., F.R.C.P., 30, Devonshire-street, Portland-place, W., Assistant Physician to the London Hospital; Senior Physician to the North Eastern Hospital for Children. VP, C 4, SM, S 2, ‡ 8, ‖ 3, §.
1873 SCOTT, WILLIAM, M.D., Waverley House, Huddersfield, Senior Physician to the Huddersfield Infirmary. ‡.
1873. SEDGWICK, JAMES, M.D., Boroughbridge, Yorkshire.
1868 SEDGWICK, LEONARD W., M.D., 2, Gloucester-terrace, Hyde-park, W. VP 2, C 4, § 3, ‡ 7, ‖ 2.
1869 SEMPLE, ROBERT H., M.D., F.R.C.P., 8, Torrington-square, W.C., Physician to the Hospital for Diseases of the Throat; Physician to the Eastern and Bloomsbury Dispensaries. ‡ 3, ‖ 2.
1876 SEWELL, CHARLES BRODIE, M.D., 21, Cavendish-square, W. ‡ 3.
1865 SEWILL, H. E., 6, Wimpole-street, Dental Surgeon to the West London Hospital. ‡ 5, ‖ (*Councillor.*)
1874 SHEPPARD, EDGAR, M.D., F.R.C.S., Professor of Psychological Medicine, King's College, London; Resident Superintendent (Male Department), County Asylum, Colney Hatch, N. ‡ 2.
1871 SHETTLE, R. C., M.D., Reading, Physician to the Royal Berkshire Hospital. ‖, NS.
1871 SHIPTON, W. PARKER, Buxton, Derbyshire, Consulting Surgeon to the Devonshire Hospital.
1868 *SIMMS, FREDERICK, M.B., 14, Albert-mansions, Victoria-street, S.W. ‡, C 2, ‖ 3.
1868 SIMS, T. MARION, M.D., Paris. NS.
1873 SKINNER, STEPHEN, M.B., Clevedon, Somerset, Surgeon to the Clevedon Dispensary.
1873 SLATER, JOHN T., M.D., 1, Thornhill-crescent, Islington, N.
1862 SLIGHT, GEORGE, M.D., 3, Clifford-street, W. ‡ 2, C 2.
1871 SLOMAN, S. G., Farnham. NS.
1845 SMILES, WILLIAM, M.D., 44, Bedford Square, W.C., Surgeon to the House of Correction, Coldbath Fields, and House of Detention, Clerkenwell, VP 2, S 4, C 9, SM, ‡ 6.
1873 SMITH, T. GILBART, M.A., M.D., 68, Harley-street, W., Physician to the Royal Hospital for Diseases of the Chest; Assistant Physician to the London Hospital. ‖, ‡ 5 (*Councillor*).

Elected

1848 Smith, Henry, F.R.C.S., 82, Wimpole-street, Professor of Surgery at, and Surgeon to, King's College Hospital; Consulting Surgeon to the Westminster General Dispensary. p, vp, c 3, o, ll, ‡ 10, || 4.

1873 Smith Heywood, M.A., M.D., 2, Portugal-street, Grosvenor-square, W., Physician to the Hospital for Women and the British Lying-in Hospital. || 2, ‡ 4 (*Councillor*).

Smith, J. Gregory, Honorary Fellow, *q. v.*

1877 Smith, Sydney L., 112, Gower-street, W.C.

1872 Smith, Walter, 2, Stanhope-terrace, Gloucester-gate, Regent's-park, N.W.

1874 Smith, W. Robert, M.B., 250, Fulwood-road, Broomhill, Sheffield, Honorary Medical Officer to the Hospital for Sick Children, Sheffield.

1874 Smyth, William Woods, Kent County Ophthalmic Hospital, Maidstone.

1869 Spender, John Kent, M.D., Bath, Surgeon to the Mineral Water Hospital. fm 1874, ‡, ns.

1864 Squire, A. J. Balmanno, M.B., 24, Weymouth-street, Portland-place, Surgeon to the British Hospital for Diseases of the Skin, Great Marlborough-street.

1869 Stear, Henry, Saffron Walden, Surgeon to the Saffron Walden Hospital, ns.

1869 Stedman, James R., M.D., Guildford, Coroner; Consulting Surgeon to the Surrey County Hospital. ‡ 3, ns.

1848 Stocker, John Sherwood, M.D., 2, Montagu-square, W., Physician to the Western General Dispensary. c 10, s 2, ‡ 7, ||.

1877 Stowers, James Herbert, M.D., 15, Lower Tulse-hill, S.W., Honorary Physician to the Brixton Dispensary.

1873 Strange, W. Heath, M.D., 2, Belsize-avenue, Belsize-park, Surgeon to the Hampstead Dispensary.

1878 Sullivan, John, M.D., late Physician to the Royal Hospital, Havannah.

1876 Sutherland, Henry, M.A., M.D., 6, Richmond-terrace, Whitehall, S.W., Lecturer on Insanity at the Westminster Hospital, Physician to the St. George's, Hanover-square, Dispensary. ‡ 2.

1874 Sutro, Sigismund, M.D., F.R.C.P., 37a, Finsbury-square, E.C., Consulting Physician to the German Hospital.

1864 Tait, E. W., F.R.C.S., 10, Highbury-park, N. ||, ‡.

1870 Tait, Lawson, F.R.C.S., 7, Great Charles-street, Birmingham, Surgeon to the Birmingham and Midland Hospital for Women. ns.

1875 Tamplin, C. H., 52, Maddox-street, W.

1869 Taylor, Charles Bell, M.D., F.R.C.S. Ed., Nottingham, Honorary Surgeon to the Nottingham and Midland Eye Infirmary.

1863 Teevan, W. F., B.A., F.R.C.S., 10, Portman-square, W., Surgeon to the West London Hospital and to St. Peter's Hospital. c 3, o, ‡ 7, || 5 (*Lettsomian Lecturer, Vice-President*).

1858 Thane, G. D., M.D., 15, Montague-street, Russell-square. ‡ 3.

Elected

1874 Thomas, Llewellyn Morgan, M.D., 15, Weymouth-street, Portland-place, W., Physician to the Royal Academy of Music. ‡.

1876 Thomason, W. J., M.D., Langston Lodge, Brandon-road, Southsea; Staff Surgeon R.N.

1859 Thompson, E. Symes, M.D., F.R.C.P., 33, Cavendish-square, W., Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, S.W.; Gresham Professor of Medicine, &c. vp, s 3, sm, c 3, ‡ 9, ‖ 5.

1855 Thompson, Sir Henry, F.R.C.S., 35, Wimpole-street, W., Surgeon Ext. H.M. King of the Belgians and Commander Order Leopold; Emeritus Professor of Clinical Surgery to University College Hospital, &c. vp, c 4, ll, ‡ 9, ‖.

1873 Thomson, John R., M.D., Dunedin, Bournemouth, Consulting Physician to the Bournemouth General Dispensary.

1871 Thorne, Wm. Bezly, 5, Gledhow Gardens, West Brompton, S.W.

1876 Thornton, J. Knowsley, M.B., M.C., 83, Park-street, W., Surgeon to the Samaritan Free Hospital for Women and Children. ‡ 2.

1867 Thorowgood, John C., M.D., F.R.C.P., 61, Welbeck-street, W., Physician to the City of London Hospital for Chest Diseases; Lecturer on Materia Medica at the Middlesex Hospital. l, s 2, sm, c 2, ‡ 8, ‖ 3, ll (*Councillor*).

1854 Thudichum, J. L. W., M.D., F.R.C.P., 11, Pembroke-gardens, Kensington, W. vp, c, o, ll, ‡ 13, ‖ 2.

1876 Tibbits, Herbert, F.R.C.P. Edin., 30, New Cavendish-street, Senior Physician to the West London Hospital for Paralysis and Epilepsy.

1873 Tidy, Charles Meymott, M.B., 3, Mandeville-place, W., Professor of Chemistry and Medical Jurisprudence, London Hospital; Medical Officer of Health for Islington.

1848 Tilt, E. J., M.D., 27, Seymour-street, Portman-square, W., Consulting Physician to to the Farringdon General Dispensary and Lying-in Charity. c 4, ‡ 2, ‖ 4.

1867 Timms, Godwin W., M.D., 9, Wimpole-street, W., Senior Physician to the North London Hospital for Consumption.

1836 Townley, James, F.R.C.S., 302, Kennington-park-road. c 3, ‡ 13, ‖ 5.

1863 Travers, William, F.R.C.S., 2, Phillimore-gardens, Kensington. ‖, ‡.

1868 Tuke, Thomas Harrington, M.D., F.R.C.P., 37, Albemarle-street, W. c 2, ‡ 3.

1878 Vasey, Charles, 5, Cavendish-place, W.

1874 Verley, R. Louis, 88, Gower-street, W.C. ‡ 2.

1850 Waggett, John, M.D., F.R.C.S., 40, Ladbroke-grove, Kensington-park-gardens, W. ‡ 2, ‖.

1850 Wakley, Thomas H., F.R.C.S., 96, Redcliffe-gardens, South Kensington, S.W., Consulting Surgeon to the Royal Free Hospital. ‡ 4.

Elected

1877 Walker, George, 1, St. George's-place, S.W.

1869 Walker, John Swift, M.D., Hanley, Staffordshire. ns.

1869 Walker, Joseph, M.D., 22, Grosvenor-street, W., Dental Surgeon and Lecturer, Westminster Hospital. ‡ (*Councillor*).

1868 Wane, Daniel, M.D., 20, Grafton-street, Bond-street, W.

1872 Waters, John, 41, Bloomsbury-square, W.C. ‡, || 2.

1868 Watkins, Charles S., 16, King William-street, Strand, W.C. ‡ 2, ||.

1863 Watson, W. Spencer, F.R.C.S., 7, Henrietta-street, Cavendish-square, W., Surgeon to the Royal South London Ophthalmic Hospital, and to the Great Northern Hospital. c, ‡ 3, || 3.

1869 Webster, F. R., St. Albans, Herts. ns.

1877 Weiss, Hubert F., 33, Chester-terrace, Regent's-park, N.W.

1838 Wells, J. R., F.R.C.S., 20, Fitzroy-street, W. c 2, ‡ 6, || 4.

1873 Welsh, Joseph, Knighton, Radnorshire.

1869 White, Joseph, F.R.C.S. Edin., Nottingham, Surgeon to the Nottingham General Hospital. ns.

1877 Whitmore, W. Tickle, 7, Arlington-street, Piccadilly, W., Surgeon to the St. George's and St. James's Dispensary.

1872 Whitton, George E., M.B., Madras Army. ||. ns.

1868 Wiblin, John, F.R.C.S., Southampton, Sanitary Surveyor to the Board of Trade. ns.

1871 Wilkinson, J. Sebastian, F.R.C.S., 83, Wimpole-street, W., Surgeon to the Central London Ophthalmic Hospital, and to St. George's, Hanover-square, Dispensary.

1862 Willett, E. Sparshall, M.D., Wyke House, Syon-hill, Isleworth. c 3, ‡ 7, || 4.

1872 Williams, A. Wynn, M.D., 1, Montagu-square, W., Physician to the Samaritan Hospital. ‡ 2, ||.

1872 Williams, C. Theodore, M.A., M.D., F.R.C.P., 47, Upper Brook-street, Grosvenor-square, W., Physician to the Hospital for Consumption and Diseases of the Chest, Brompton. s 2, sm, ll, ‡ 7, || 3 (*Vice-President*), l.

1868 Williams, Henry L., M.D., 9, Leonard-place, Kensington. ||.

1876 Williams, H. W.. M.D,, 168, Fulham-road, S.W. ‡.

1873 Wills, T. M., F.R.C.S.I., 59, Clifford-villas, Merton-road, Bootle, Liverpool, Surgeon to the Bootle Hospital.

1870 Wilson, Erasmus, F.R.S., F.R.C.S., 17, Henrietta-street, Cavendish-square, Professor of Dermatology to the Royal College of Surgeons. p, o, || 5, ‡ 6, c 2 (*Councillor*).

1870 Wiltshire, Alfred, M.D., F.R.C.P., 57, Wimpole-street, Physician for Diseases of Women to the West London Hospital; Assistant Physician-Accoucheur and Joint Lecturer on Midwifery to St. Mary's Hospital. c 3, ‡ 6, ||, s 2, sm, ll (*Councillor*).

1873 Winslow, L. S. Forbes, M.B., D.C.L., 23, Cavendish-square, W., Lecturer on Mental Diseases at the Charing-cross Hospital. ‡ 5.

Elected

1870 **Wise, James**, M.D., Dacca, Bengal. NS.

1872 **Wise, W. C.**, M.D., 241, Burrage-road, Plumstead, Physician to the Plumstead Dispensary.

1876 **Woakes, Edward**, M.D., 57, Harley-street, W., Surgeon to the Hospital for Diseases of the Throat. ‡ 2.

1861 **Wolff, Abraham**, F.R.C.S., 48, Gloucester-gardens, Hyde-park, W. ||, ‡ 3.

1873 **Woodhouse, R. Hall**, 1, Hanover-square, W., Assistant Surgeon, Dental Hospital.

1869 **Wookey, James**, Potters Bar, Barnet. NS.

1873 **Wordsworth, J. Cawood**, F.R.C.S., 20, Harley-street, W., Senior Surgeon to the Royal London Ophthalmic Hospital. ‡ (*Councillor*).

1870 **Ziffo, Jean E.**, Constantinople. N.S.

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PROCEEDINGS

OF THE

MEDICAL SOCIETY OF LONDON.

October 15*th,* 1877.

George Buchanan, M.D., F.R.C.P., President, in the Chair.

The **President**, on taking the chair, read an opening address (see 'British Medical Journal,' November 10th, 1877), after which Dr. **Braidwood** read a *résumé* of the essay on

PYÆMIA,

for which he obtained the Fothergillian Gold Medal in March last.

Chapter I consisted of an historical review, based partly on the corresponding chapter of the author's monograph, published in 1868, and containing the literature of the subject up to the present time, including the debate on pyæmia held by the Clinical Society in 1874, and that on puerperal fever held by the Obstetrical Society in April, 1875.

Chapter II contained a clinical study of the subject, and embraced twelve hitherto unpublished cases, one half being derived from hospital practice, the other from private patients.

Of the hospital cases, No. 1 received a severe incised wound over the left hip, which was followed by phlebitis, traced at the autopsy as far as the vena cava inferior. No. 2 was an example of idiopathic pyæmia; and here, too, the post-mortem appearances were characteristic chiefly of phlebitis. The patient (a woman) had also a large hepatic abscess. No. 3 died from pyæmia after amputation of the upper arm for epithelioma of the hand. No. 4 died on the twenty-fifth day after stricture of urethra had been split by Mr. Holt's method. No. 5 was also a case of urethral stricture, during the treatment of which by dilatation perineal suppuration set in, requiring external urethrotomy. The patient died on the eighth day after this operation, and the post-mortem examination showed local phlebitis, cystic inflammation, and ulceration and secondary visceral suppurations. No. 6 was a very well developed example of pyæmia, occurring in a seaman while at Valparaiso, who sustained a strain in the neighbourhood of his right hip, which at first caused no inconvenience, but in about a week was followed by a swelling of the right groin, and he went into hospital. The tumefaction increased in size, and various consultations were held. A puncture was made whereby pus was evacuated; pneumonia followed, with great emaciation. In this condition he left Valparaiso and returned to England.

When seen by the author six months after the accident he presented all the characteristic symptoms of pyæmia, with a sinus in the right groin and pneumonia of the right lung. He died a fortnight after.

Of the remaining six cases narrated in the author's essay one was an instance very similar in history and symptoms to the above case, while the other five exhibited puerperal septicæmia in varying degrees of severity. Only one of these patients died.

Of the puerperal cases one was an example of ordinary subacute metritis, and the septicæmic symptoms present were rigors; at intervals periodic profuse perspirations, fœtid, sanious, greenish-coloured lochia, great uterine tenderness, and emaciation. Every general practitioner is familiar with cases of this kind, but the importance of detecting early and treating wisely, such cases will be illustrated by the experimental inquiry, which the author thus describes:

Mrs. M—, æt. 35, a primipara, strong and healthy, was delivered, after a tedious labour, of a well-developed child, without requiring the use of forceps, but having sustained a slight laceration of the perineum. All went well for twenty-four hours, when she experienced a rigor, followed by severe pyrexia; pulse 130; hurried respiration; anxious countenance; scanty lochia, but with no uterine tenderness nor diminished lactation. In six hours more the lochia had ceased, and there was considerable pain on pressure over the uterus, notwithstanding the use of poultices and syringing with hot water, the perineal wound being dressed with carbolic oil. No further rigors were experienced, but on the fourth day after her confinement there was some uterine discharge, while the lacteal supply was scanty in amount, and resembled dirty water. Next day her temperature was 104·5°; pulse 120; respirations 38. She had great uterine tenderness, and the discharge was very fœtid and purulent. Diarrhœa and tympanitis now set in, and rigors threatened to recur. The secretion removed from the breasts on the fifth day after delivery was a dirty-white fluid of alkaline reaction, and on standing showed a layer of cream one eighth of an inch thick. Examined microscopically it exhibited ill-formed milk-globules; some enclosing granules, free granules, blood-corpuscles, phosphate crystals, vibrios and bacteria. This was the microscopical appearance of the milk next day, but I am doubtful whether the last organisms were primarily in the milk or became developed during the few hours the fluid stood, though care was taken to protect it from the external air. The author here pointed out the necessity of examining mammary secretions in like cases. The pulse and temperature were improved on the next visit the following day, but, in the evening, phlebitis of the internal saphena was detected. Abdominal distension was less, uterine tenderness was absent, and the patient's general condition improving, until the evening of the next day, when vomiting and diarrhœa occurred. Now, the larger superficial veins of both fore-arms were found swollen, firm, and painful. Next day (the eighth after confinement) the patient complained of aural noise like distant bands of music; of curious sensations like gusts of wind passing over her body. Her pulse was 142, respiration 38, and temperature 103·8°, and pneumonia was detected at the base of the left lung at the evening visit. Her condition did not improve, and she died on the eleventh day after delivery. This is a typical instance of puerperal phlebitis accompanied with septicæmia.

There remain now only three cases in the chapter of the author's essay on the clinical study of pyæmia. These were all puerperal patients. One of them suffered from perityphlitic abscess during the last four months of pregnancy, and, as was anticipated, she showed septicæmic symptoms immediately after delivery. Free incision of the abscess, washing its cavity well out daily with water containing carbolic acid, supporting the patient's strength with abundance of suitable nourishment, and the liberal exhibition of quinine, resulted in recovery. The other two patients were instances of distinct but not severe attacks of puerperal septicæmia. The next or third chapter of the author's essay is the most novel of his work. Having studied as far as possible all the observations hitherto prosecuted in this field of inquiry, and feeling that experimental research has not thrown much light on the etiology of pyæmia, and noting that experimenting had elicited no further truth from their labours than that the symptoms and post-mortem appearances distinctive of pyæmia can only to a certain extent be developed in animals by inoculating them with a variety of different fluids —healthy and putrid, organic and inorganic, chemical and animal— he desired by the use of some human secretion not hitherto tried to induce a pathological condition in animals analogous to septicæmia, pyæmia, or suffocative fever in the human subject. The author then decided on using human lochia for the purpose of producing septic poisoning. The series of experiments consisted of twenty-five, and since his essay was written he has carried on a second series of twenty-two, which have confirmed the results he had obtained before. Now, in all these lochia was not used, but of those in the first series in—

13 instances lochia was employed.
5 „ pus or purulent matter.
4 „ (Dr. B. Sanderson's) emaciated muscle.
3 „ grumous fluid from the peritoneal cavity.

Twenty-three rabbits, two dogs; and of these seven rabbits and the two dogs recovered.

As to the mode of inoculating, in—

11 experiments the animals (rabbits) received the septic fluid by injection per vaginal wall.
9 „ „ (seven rabbits, two dogs) inoculated subcutaneously.
1 „ septic fluid was introduced into a vein.
3 „ „ „ injected into the abdominal peritoneal cavity.
3 „ „ „ applied to an open wound.

These experiments naturally collect themselves into six series, and they teach certain lessons regarding the different septic fluids employed, the dose required to produce results or death, the effects of different modes of inoculation, the various pathological lesions found post mortem, the relative frequency and character of the secondary deposits, and alterations in different viscera, and the result of the admixture of antiseptics with the septic fluids, as also of other treatment employed. The microscopical examination of the several septic fluids used, and of the blood of some of the animals experimented on, gave, however, no striking uniform results.

Series A represents the first rough attempt made to induce septicæmia by inoculating healthy animals with lochia. In these three instances the septic fluid was applied by soaking small pellets of cotton-wool in lochia from a patient in a slightly pyrexical condition, such as most patients present on the fourth day after parturition. The saturated wool was introduced into a small valvular incision, and retained there by means of plaster till after several days, the ulcerative process induced served for the extension of the foreign body. No constitutional symptoms seemed to be produced by this mode of inoculation. The septic fluid was offensive in odour, and inoculated in this small manner into either thigh of the same animal it produced a slow, unhealthy form of ulceration, with enlargement of the neighbouring inguinal glands, and the formation of very fœtid, greenish, purulent fluid.

The animal recovered gradually after the septic wool was taken away, the wound healed, and no ill-results followed.

In Series B the septic fluid used was also lochia removed from a patient on the third day after her confinement, and used for experiments 4, 5, 6, 7, and 8; while some was again removed at a later date from this patient, and employed in experiments 9 and 10. This forms the most extensive and important groups of the author's experiments.

The lochia used was a very fœtid, sanious, grumous fluid, containing epithelium, blood, pus, and multitudes of highly refractive granules.

In experiment 4 a drachm of the septic fluid was injected per vaginam, and the animal died thirty hours after experimentation, and a post-mortem examination revealed patches of congestion in the liver and in lower lobe of the left lung.

In experiment 5 half a drachm of the same fluid was injected directly into the abdominal peritoneal cavity, and the rabbit died in about fifteen hours. The autopsy showed that during experimentation the bowel had been punctured, and that circumscribed peritonitis had been excited round this point, but no secondary visceral lesions were found.

Experiment 6 consisted of the injection per vaginam of a drachm of the same septic fluid, combined with a drachm of an aqueous solution of carbolic acid (1 to 20). It may be remarked here in passing that our lochial solutions were obtained by wiping out the vagina with some portion of cotton-wool, then syringing the passage with one ounce and a half or two ounces of distilled water, and allowing the cotton-wool to soak in this lochial water in a test-tube till required for experiment, when the fluid was squeezed out of the wool and mixed with the remainder in the test-tube.

To prevent as much as possible the decomposing influence of air the mouth of the test-tube was plugged up with cotton-wool and covered with oiled silk tied firmly on. Except temporary malaise and increase of bodily temperature this rabbit (experiment 6) showed no symptoms of ill-health, and was quite well in a few days after being experimented on.

Experiments 7, 8, and 10, terminated fatally.

In experiment 7 a drachm of the same lochial solution, mixed with 40 drops of Sol. Acid. Sulph., was used (B. P.), and 20 drops of distilled water was injected per vaginam.

This caustic antiseptic produced œdema of the vaginal orifice, and a large sloughing wound of all the superficial soft tissues of the lower third of the abdomen exposing the viscera. A second comparatively small sloughing wound was induced near the umbilicus of this animal by lymphatic sympathy, probably with the first one, and other superficial abscesses formed in different parts of the body at a later date. This animal presented characteristic constitutional symptoms, and died just one calendar month after inoculation in a very emaciated state. On post-mortem examination typical secondary deposits were found in both lungs, in the liver, and in the mesentery.

These deposits appeared as minute whitish spots, surrounded by a reddish zone and scattered over the various surfaces of the viscera, combined in the lungs with minute superficial hæmorrhagic extravasations. On microscopic examination these spots exhibited capillary thrombosis, surrounded by circumscribed exudations of blood into the tissue of the organ. No purulent fluid was detectable in any of the secondary visceral deposits met with in any of the experiments. It is evident from this experiment (7) that sulphurous acid does not destroy the septic property of lochia.

In experiment 8 a drachm of the same septic lochia as was used for the last experiments (4 and 7), combined with a drachm of saturated solution of potassium permanganate, was injected into the abdominal cavity of a rabbit by puncture over the symphisis pubis. Excepting temporary slight ill-health, this rabbit appeared unaffected by the inoculation till the fourteenth day after experiment, when it was observed to be very ill, and exhibited a large abscess over its right hip. This animal died on the fifteenth day after experiment.

Whether the subcutaneous abscess resulted from the septicæmic condition induced in this animal, or was secondary by contamination from the intra-pelvic abscess found after death, or originated from a slight contusion received by the animal accidentally at the date of experimentation, must remain a debateable point. In this animal an autopsy discovered signs of recent peritonitis, secondary deposits in the liver such as were found in experiment 7, and a large abscess filling the right half of the pelvic cavity.

For experiments 9 and 10 a lochial solution was obtained from the same patient at a later date—on the sixth day of her confinement.

In experiment 9 the septic wool was inserted into the sloughing wound in rabbit (experiment 7), the wound was covered with oiled silk and a bandage applied, but this method produced no appreciable result.

In experiment 10 a drachm of the lochial solution was injected per vaginam. The septic fluid presented microscopical characters similar to that last used.

The symptoms produced were pyrexia, with increased bodily heat, disinclination for food, thirst, listlessness, and before death hurried respiration.

In this instance, also, subcutaneous abscesses formed in various parts of the body. This animal died on the fourth day, about 100 hours after being inoculated.

On post-mortem examination there were found signs of slight recent peritonitis in the pelvis and characteristic secondary deposits scattered through the liver, through both lungs, and on the left cardiac wall.

Series c (referring to illustrations) is intended to illustrate the results produced by inoculating rabbits with purulent fluid obtained not from human beings, as this had been done by previous investigation, and proved unsuccessful, but from rabbits which had died from septicæmia, as shown by post-mortem examination.

In experiment 11 half a drachm of purulent fluid obtained from rabbits (experiment 8), combined with half a drachm of distilled water, was injected per vaginam.

In experiment 12 a like amount of the same mixture was injected into the abdominal cavity, and in experiment 13 a few drops of the same septic mixture was injected into the right femoral vein of a third rabbit.

This septic fluid exhibited on microscopical examination pus, blood, bacteria, phosphates, and highly refractive granules. Animal 11 died in about twenty-four hours after inoculation, and the autopsy showed local signs of inflammation near the point of injection, but no secondary visceral deposits. Animal 12 died on the seventh day after experimentation, having exhibited some pyrexial symptoms, ending in convulsions. On post-mortem examination there were found extensive subcutaneous inflammation and lymph deposit in the abdominal wall, like signs of inflammation in the abdomen, secondary deposits in the liver similar to those found in the last series, circumscribed hæmorrhagic extravasations in the lungs, and congestion of the membranes covering the brain. Rabbit 13 died also on the seventh day after experimentation. In this animal also were found the signs of extensive suppurative inflammation and lymph deposits subcutaneously in the lower half of the abdomen and in the right inguinal region. In the lower lobe of the right lung were found characteristic secondary deposits, and the blood in the vessels was observed to be very coagulable.

Experiments 14 and 15 consisted of the injection of an aqueous solution, the purulent fluid removed an hour previously from the rabbit which died in the last experiment was injected subcutaneously over the left shoulder of a rabbit and a puppy; twenty drops were thus injected.

This produced local circumscribed abscesses at the seat of inoculation. One of large size in the dog, which burst, causing a large wound that gradually cicatrised, while the abscess in the rabbit became gradually absorbed, but induced more distant, circumscribed, subcutaneous abscesses. No distinct constitutional symptoms were produced in these animals.

Series D includes experiments 16, 17, 18, and 19. For these the septic fluid employed by Dr. B. Sanderson in some of his experiments on infective processes was employed. Rabbit 16 received a drachm of this septic fluid per vaginam, and died in about twelve hours after. There were no marked traces of disease to be found in any of the viscera after death.

In experiment 17 half a drachm of the same septic fluid was injected subcutaneously over the left shoulder of a rabbit, it died convulsed in about fifty hours after inoculation; the post-mortem examination showed in the liver and ilium adjoining the caput cæcum caseous deposits of varying size. Circumscribed patches of congestion were seen scattered over the surface of the colon and in the right lung.

In experiment 18 half a drachm of this same septic fluid, combined with half a drachm of a saturated solution of cupralum, was injected subcutaneously, as in the last instance. This produced a large localised abscess, which became more or less absorbed, but the animal died on the twenty-fourth day after being experimented on. This animal presented no pyæmic symptoms during life, nor were any secondary lesions discovered in the viscera after death.

Experiment 19, the last of this series, consisted in inoculating a rabbit per vaginam with half a drachm of the same septic fluid mixed with a solution of carbolic acid, 1 to 20 aquæ, and it died. This animal presented no characteristic symptoms during life, but on post-mortem examination it showed extensive caseous infiltration in the liver, spleen, and mesenteric glands, the lymph vessels of the mesentery through engorgement were readily seen by the naked eye, and in the pelvic cavity purulent fluid had accumulated.

None of the series of experiments differed in the symptoms presented, but they exhibited certain important variations in the potency of the different septic fluids employed, and in the character of the secondary deposit found in the viscera. Lochial solution was poisonous, but not so strong as the purulent fluid used for Series C, and this again was surpassed in potency by the septic fluid applied in Series D. This is shown by the relative number of deaths, and rapidity of the death in these three series produced by a like dose of the poison administered by a certain method.

As regards the character of the secondary visceral deposits in these Series. it is to be noted that Series D differed very essentially from B and C. Comparing Plate III with Plate IV it is distinctly seen that the secondary deposits in the latter, derived from Series D, are markedly raised above the surface, do not show the congestive zone stated before as found in the secondary deposits discovered in Series B and C, and appear to the naked eye of a yellowish colour, while on section they cut gritty like caseous matter. On account of the last property it was found very difficult to make sections of the deposits from Series D sufficiently thin for them to be available for microscopical examination; this, however, showed marked differences in the appearance of the secondary deposits from Series D.

For Series E a solution of lochia was used as in Series A and B, and in a few minutes after its removal from the patient (Case 12). The microscopical character of this septic fluid require no special remark, except to note that the absence in it of any signs of microzynin organisms. The rabbit (experiment 20) having received two drachms of the septic fluid per vaginam by injection died on the eighth day after, without showing any marked symptom. In this instance the pathological lesions were, at post mortem, acute peritonitis in the abdominal and pelvic cavities, secondary deposits were seen in the liver, the mesenteric vessels were engorged, and there was congestion of the left pulmonary apex.

To test the influence of quinine in pyæmia a rabbit (experiment 21), about the same size as the last, was treated in a precisely similar manner. On exhibiting signs of malaise, twenty-four hours after experimentation, this animal received half a grain of quinine, in neutral solution, by hypodermic injection, and on the third day after inoculation two more doses of like quantity were administered, the only result being that this animal (experiment 21) lived twenty-four hours longer than its neighbour, experiment 20. The post-mortem appearances exhibited by rabbit, experiment 21, were almost identical with those found in the animal, experiment 20.

For experiment 22, injection per vaginam was also employed, and to two drachms of the same septic lochia last used were added two drachms of a saturated solution of cupralum. This so termed antiseptic seems to have accelerated death, and the only pathological lesions revealed by the autopsy were congestion in both lungs, especially severe in the right lower pulmonary lobe.

Series F illustrates the effects produced by inoculation with fœtid grumous serum from the abdomen of a rabbit (experiment 21) which had died of septicæmia. In two of the experiments constituting this Series, the subcutaneous injection of two drachms of this septic fluid each into a dog and a rabbit excited no appreciable symptoms, local nor constitutional. Rabbit, experiment 25, received per vaginam fifteen drops of this septic serum. The most interesting effect observed during life in this instance, was that microscopical examination of the blood showed this fluid to be preternaturally coagulable, while its red blood globules exhibited less adhesiveness than in health, and their edges were distinctly crenated. These characters were further noticed to become less marked as the animal continued to live. This animal received its death from accident, as proved by the post-mortem examination, and, accordingly, none of its viscera showed pyæmic lesions. It is, therefore, to be inferred from these experiments that the fœtid grumous serum used in Series F was not septic.

The fourth chapter of the author's essay details the microscopical observation made on the viscera of rabbits experimented on, and describes the plates accompanying the MSS. The last chapter treats of the etiology,. pathology, symptomatology, prognosis, and treatment of pyæmia, taking a view of experiments 4 to 10. The source of the septic fluid was a healthy primipara, who had a tedious and severe confinement, which required to be ended by the use of the forceps. The perineum received a rent of about an inch, post-partum hæmorrhage followed, and she suffered greatly from shock; twenty-four hours after delivery her pulse was 104. She seemed sinking, and the lochia were fœtid and watery. The next day (the third after delivery) pulse 112 and compressible, temperature 100·7°; mammary secretion like brown water, and scanty, lochia very fœtid, and great pain on pressure over the uterus. Two grains of quinine in Magnes. Sulph. mixture ordered every four hours, poultices over the uterus, and vagina to be syringed twice a day with warm water containing Condy's fluid. Next day pulse and temperature were improved, the uterine tenderness was almost completely gone. The mammary secretion resembled milk, but the lochia were still fœtid. Considerable improvement was seen on the day following, but she continued to show septicæmic symptoms, as profuse perspirations, periodic fainting fits (in place of rigors), and fœtid lochia with rapid pulse and high temperature till eighth day after confinement, when she became fairly convalescent. It was the third day after delivery when the patient was in the state described, that a portion of her lochia was used for experimentation. Of the five rabbits experimented on only one recovered, one died in thirty hours after inoculation, and showed patches of congestion in the liver and left lung, a third died in fifteen hours after experimentation, and exhibited no visceral lesions, the cause of death being peritonitis from puncture of the intestine during injection, a fourth lived for a month after being inoculated with mixture containing a drachm of lochial solution, 40 drops of Sol. Acid. Sulph., and 20 drops of distilled water. Œdema of the labia and then sloughing of the soft tissues followed the experiment. After death two deposits were found in the liver and lungs, and subpleural extravasation in the ileum. The fifth rabbit died on the fourteenth day after with equal portions of lochial solution and a saturated solution of pot. permanganate. In this animal the autopsy exhibited two deposits in the liver, congestive patches in the ileum, and a large pelvic abscess over the right hip, induced probably by a slight contusion received immediately after experimentation. These are not isolated results, but secondary lesions, which the author produced in a considerable portion of the rabbits inoculated with lochial solution. The microscopical characters are—in the lungs two forms of lesions are seen, blackish red spots and dirty white spots surrounded each by a red zone. A section through the former, examined under a low power, shows capillary embolism leading to extravasation of blood into the alveoli, while under a quarter-inch objective these same spots show these features more distinctly, and the borders of the air-vesicles are seen chiefly mapped out by rows of highly turgid corpuscles heaped together. The dirty white spots show under the microscope a like embolic origin, while the difference in colour is due to decolorisation of the exuded blood and its gradual transformation into purulent fluid; a section through the secondary deposits in the liver, examined microscopically, shows obliteration of the hepatic cells in the centre of a lobule surrounded by a circle of deeply-tinged cells pushing outwards the serous envelope. Under a quarter-inch objective, in the centre of this spot are seen very minute capillaries occluded by clots causing exudation of serum and of blood globules which push aside the hepatic cells. At the circumference of the spot the cells are to be seen elongating as if forming a capsule to enclose the exuded blood. Here we have the septic infection from its origin in the pyrexial patient after confinement, through the rabbit poisoned by inoculation with lochia, and find the result to be such an alteration of the blood as produces capillary embolism in the viscera. But the experiments prove the secondary deposits of like embolic origin are produced by other fluids as well as lochia. Secondary deposits are shown in the liver induced by injecting subcutaneously half a drachm of bacterial fluid obtained by macerating muscle for fourteen days in distilled water at a temperature of 70° Fahr. This animal lived fifty hours after experiment, and post-mortem examination showed patches of congestion of the right lung, and secondary deposits in liver. It is to be noted, however, that the secondary deposits in the liver differ from those induced by lochial inoculations, inasmuch as they are irregular in shape, and are raised above the surrounding surface, have no limiting zone of congestion and cut gritty, moreover, the secondary deposits show a much more rapid degenerative transformation. The author, in conclusion, pretended to no great discovery, but trusted he had demonstrated clearly the septicity of lochia, the probable origin of all secondary visceral deposits, suppurative or other, occurring in patients suffering from pyæmia and septicæmia, and hoped his remarks would be beneficial in drawing the attention of practitioners to watching their puerperal cases with the greatest care, so as to detect the earliest symptoms of blood-poisoning, and thus ward off a fatal result. Steering his course through researches like the preceding, the experimenter has to guard against shipwreck on two rocks especially. He requires to avoid multiplying experiments and thus wasting material, and he must beware of generalising from insufficient data.

Bearing this in mind the author felt his work far from being at an end, and hoped sincerely, before another year is over, to be able to throw further light on this important subject.

With regard to pyæmia or septicæmia, the author had no specific to recommend, but he had endeavoured by the ordinary admixture of antiseptics with septic fluids to modify their septicity, but failed to do so; further, he would mention quinine as the remedy he most relied on for blood-poisoned patients. His experience was to combat the septicæmic condition; he would advise to diagnose early and pour in quinine; and he concluded his abstract by saying:

"Science moves but slowly,
Slowly creeping, creeping on from point to point."

Dr. HARE being called upon by the President to address the Society on the author's *résumé*, said "he would merely thank Dr. Braidwood for the able manner in which he had brought the subject forward, and complimented him on the careful and complete manner he had conducted the experiments in this inquiry. The only one point in which he was not clear was why the author laid such stress on the efficacy of quinine in the treatment of septicæmic cases, as he had not apparently carried out any special observations to determine that point, at least they had not been narrated. In his opinion this was not a time to discuss such a paper, and no doubt a future opportunity would occur for doing so.

Dr. Routh then proposed a vote of thanks should be given to Dr. Braidwood, which, being put from the Chair, was carried by acclamation.

October 22nd, 1877.

Leonard W. Sedgwick, M.D., Vice-President, in the Chair.

Mr. J. Knowsley Thornton read notes of a case of

REMOVAL OF LARGE FIBROID UTERUS WITH OUTGROWTHS, AND OF BOTH OVARIES.*

He commenced by stating that the patient whose case he brought before the Society during last session was now perfectly strong and well.

The present case had unfortunately a different termination, but he was convinced that the only way to establish the justifiability of complete ablation of the uterus was by a thoroughly faithful record of all cases, whether successful or fatal, and he proposed, with the permission of the Society, to bring before it a note of all cases of uterine tumour upon which he operated by abdominal section, and in doing so he should have no fear of the final verdict when the last case came to be recorded.

He did not believe that hysterotomy would be ever so common as ovariotomy, as the nature of the disease for which the operations are respectively undertaken are so different in course and result if left alone.

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* This paper has been published *in extenso*. See 'Medical Times and Gazette,' vol. for 1878, p. 6.

He considered pain, hæmorrhage, and size, the three factors to be taken into consideration as justifying the operation. The social status of the patient was also inportant, as the power to obtain proper medical treatment combined with perfect rest and good nursing, had undoubtedly great influence in the decision as to operation or no operation.

The case now recorded was that of a widow, æt. 38, a cook, who had been under his care as an out-patient for twelve months, during which time she was seen in consultation by Mr. Spencer Wells and others. All palliative treatment had a fair trial. The tumour continued to enlarge chiefly in the pelvis, both pain and hæmorrhage became severe, obliging her to give up her situation, the only means of earning her living.

The operation was performed at the Samaritan Hospital on July 17th, 1877. Mr. Thornton's colleagues, Dr. Bantock, Dr. Champneys, and Mr. Meredith assisting; the latter administering bichloride of methylene, and afterwards chloroform. Mr. Thornton then described the stages of the operation, which occupied two hours; the chief difficulties encountered were dislodgment of the tumour from the pelvis, and transfixing and ligaturing the pedicles. Finally, the whole cut surface of the broad ligament was laced with a connected chain of strong silk ligatures. He was induced to adopt this method as it was so successful in the case he had recorded before, and by certain cases of Mr. S. Wells, but most of all by its great success in his own ovariotomies. He had used it entirely for one or both pedicles in thirty-two ovariotomies, losing only five, and in only one of the five could the ligature be credited with the fatal result. The tumour removed weighed 3lbs. 13½ oz. together with the ovaries. The right ovary had a group of par-ovarian cysts attached to it. At first the patient did well, but she died in thirty-five bours of rapid septicæmia. The autopsy, sixteen hours after death, showed no general peritonitis, and nothing to account for death, but some putrid suppuration around the pedicle.

Reviewing the steps of the operation, Mr. Thornton pointed out certain details which he thought open to question, and of importance to all performing the operation, and he quoted some remarks of Mr. Spencer Wells, made in his late address at Manchester, in support of his argument. He regretted not having used a Keetes' glass drainage tube, and in conclusion made some suggestion as to the method he would adopt in future, advocating dilatation, softening and cleansing of the cervix, the use of silver wire applied by M. Cintral, serre nœud in place of silk when uterine tissue had to be transfixed, especially if there was danger of passing through the cavity of the uterus or the cervical canal, and the habitual use of a glass drainage tube in all cases of hysteriotomy, at any rate for twenty-four hours after operation. He would not discard silk ligatures altogether, but would seek anxiously for some more trustworthy material. Possibly silver wire or some form of catgut might be found preferable.

Dr. **Sedgwick** thought it was well to follow in the steps of Mr. Thornton, who had severely criticised his own operation and, although it terminated fatally, had not hesitated to bring the case before the Society for further criticism.

Dr. **Routh**, although loath to speak on this subject, yet, being called on by the President to do so, said he could not but admire the boldness of the author in undertaking the operation. He quite agreed that cases might arise, although rarely, for such an operation among the working classes of London, in consequence of severe flooding, pain, and constant ailing, we might be justified in employing such a procedure. He thought that the fatal result in this case was due to the number of silk ligatures used; he would, above all, advise, if possible, (1) that the pedicle be left outside; (2) that the ligatures employed should be catgut; (3) that the cervix should be transfixed with needles, and an india-rubber ring applied below; these means would probably shorten the length of time otherwise usual in operations of this nature.

Mr. **Maunder** stated that he had no experience himself in these cases, but comparing them with ovariotomy, of which operation he had had some twenty cases, and in which he had never used a clamp, he would be inclined to be content with transfixing a ligature, and in favour of closing the abdomen entirely.

Mr. **Griffith** mentioned a case in which excessive discharge of serous fluid had followed the removal of a tumour from within the uterus.

Dr. **Godson** would not be inclined to compare the justifiability of operating in these cases with that in ovariotomy, as patients lived a long period with the disease the author had dealt with, although in great distress and suffering. He would like to know how long the author would have given his patient to live without operation.

Mr. THORNTON thanked the President and the Fellows for the way in which they had received his communication, and said it was his intention to bring forward all similar cases, whatever the results might be, for free discussion before the Society. He then commented on the probable means by which the stump of a ligatured pedicle lived. He had demonstrated the fact, that Beale's fluid could be injected through the fine capillaries on the surface of a pedicle which had been ligatured with the ordinary amount of constriction: he believed that the ligature cut through the peritoneal surface and so buried itself, the peritoneum healing over it. He had not used more than seven ligatures in this case: he was not able to say for certain how long the patient might have lived, but probably only one or two years in the greatest distress and suffering.

Dr. THEODORE WILLIAMS then read a case of

PERSISTENT PYREXIA IN PHTHISIS REDUCED BY DIET.

Miss B—, æt. 15, came under my care June 19th, 1877. Family history very healthy. Has been at a school in St. John's Wood for seven years—her parents living in India—and enjoyed good health until three years ago, when spinal curvature came on in a somewhat obscure manner, and was submitted to appropriate treatment, not having caused much pain to the patient. Fifteen weeks ago she was attacked by typhoid fever, which ran its usual course, and was accompanied by great prostration, and followed by rapid emaciation. Cough and expectoration came on about the 11th of April, and had continued ever since, never, however, being severe. A careful record of the temperature had been kept twice a day for nine weeks, and for five weeks once a day, under the intelligent supervision of the medical attendant, commencing with the 28th of February, and ending with the 17th of June, *i. e.* for three months and a half, the periods of observation being the usual ones for fevers, except on a few occasions, when they were varied, apparently with a view of ascertaining when the afternoon rise took place.

During the early periods of the illness we find the records high, ranging from 100° F. to 103·8° F., with morning remissions, which sank about to normal. Later on these remissions became more marked, and sank to subnormal temperatures, 96° F. being once recorded, while the afternoon maxima remained high, even when the enteric lesions had passed away.

At the beginning of June the afternoon temperature rose, and on the 9th the maximum 104·8° F. was reached, but the marking appeared, on the 19th (when I saw her first), to be generally between 102° and 104° F., it never having been, with two exceptions, below 100° F. for three months and a half, the exceptions occurring apparently at the time when the enteric fever was subsiding.

The record of the nourishment taken during the illness has also been furnished to me, and from this I learn that during the entire period of the typhoid fever the patient was fed every hour, or every two hours, with various kinds of liquid nourishment, including a small amount of brandy. After this period she appears to have returned to solids.

I saw the patient first on the 19th of June, and found her greatly emaciated, her cheeks sunken and hollow, her ribs all distinct, and her spine prominent through the loss of flesh, the arms and legs were equally emaciated; a bedsore had commenced to form over the sacrum. There was a well-marked lateral curvature towards the left side, and tenderness on pressure over the last three dorsal vertebræ, chiefly on the right of their spines. Patient stated that the deformity had increased during her illness. Appetite tolerably good, and she was said by her mother to have been taking solid food in the form of meat and vegetables, with porter and occasionally brandy, but had nevertheless been losing flesh rapidly. Tongue slightly furred, bowels relaxed, motions offensive. Pulse 120; respirations 36; skin hot and dry, temperature at 5 p.m. 102° F. Cough slight, and expectoration nearly absent. Catamenia had never appeared. Urine alkaline, abundant, but contained phosphates.

Examination of the chest showed flattening and some dulness and crepitation over the upper third of left side, with croaking cavernous sounds in the first interspace. Marked dulness and loss of tubular sounds, upper third posteriorly gave tubular sounds, audible in the upper and right front. (The signs proved conclusively the existence of a cavity.)

It was quite clear that we had to deal with a case of rapid phthisis supervening on typhoid fever in a scrofulous child, and that the principal symptoms to combat were, 1st, the pyrexia; 2nd, the rapid and continuous wasting. The prognosis, considering the persistent duration of these two symptoms, in spite, as I afterwards learnt, of the use of various drugs, such as steel, arsenic, and digitalis, was not hopeful; but bearing in mind the state of the tongue and appetite, I did not despair.

The treatment ordered *was diet.* No solids, but liquid nourishment in the form of beef tea, milk, eggs every two hours, brandy, a dessert-spoonful every four hours with the above food. Medicine:—An effervescing ammonia saline every four hours. Food and medicine to be continued night and day, and the patient if necessary to be waked for the purpose.

I directed the temperature to be taken four times a day, at 8 a.m., 2 p.m., 5 p.m., and 12 p.m.

June 22nd.—Patient takes food and medicine well, and sleeps soundly. Temperatures have only been taken twice a day, at 8 a.m. 98° F., and at 5 p.m. 101° F. At her request I substituted a glass of champagne for one dose of brandy daily, and added 2 grains of quinine dissolved in citric acid to each dose of the medicine.

26th.—Steadily improving and evidently gaining flesh, especially on her back. Bedsore healed, and redness of skin nearly disappeared. Tongue cleaner; bowels regular. Temperature 8 a.m., 96° F.; 2 p.m, 98·1° F; 5 p.m., 98° F.; 12 p.m., 97·3° F.

Medicine to be taken every six hours.

July 1st.—Solid food in form of fish or chicken once a day, other dietary unchanged.

Is rapidly gaining strength and flesh, and gets up for an hour daily. Temperature shows a marked subnormal course, 8 a.m., 95·1° F.; 5 p.m., 96·2° F.; 12 p.m., 98° F.

Ordered to substitute meat twice a day for two turns of the liquid nourishment, ½ pint of bitter ale for the champagne, and to clothe more warmly. Also Quiniæ Sulphat. gr. ij; Acidi Sulph. dil., ♏ iv; Infusi Aurantii, ℥j ter die.

3rd.—Gaining strength. A marked rise in the afternoon temperatures. Urine acid. 2 a.m., 97·2° F.; 8 a.m., 98·3° F.; 3 p.m., 100° F.; 8 p.m., 100° F.

I now judged that we might reduce the frequency of the meals, and return more to the ordinary dietary, and accordingly the night feeding was reduced to one meal at 2 a.m., and the day feeding to every 3 hours, the amount of stimulant to 1 oz. of brandy with ½ pint of ale.

9th.—Quite convalescent, driving out daily. Pulse 72; temp. 2 a.m., 97·1° F.; 8 a.m., 99° F.; 2 p.m., 99° F.; 8 p.m., 97° F.

Patient has become plump. Cavernous sounds in upper left chest, but no crepitation. Curvature as before, but marked tenderness along the concave border, where she occasionally suffered most pain. Walks about the room, and for short distances out of doors. She is going to Ramsgate.

September 17th.—Has spent six weeks at Ramsgate, carrying out directions laid down, which consisted of, 1st, to be out the greater part of the day, lying on an inclined plane, but to take one short walk daily; 2nd, the spine to be sponged night and morning with salt water; 3rd, food to be taken every three hours; 4th, stimulant to be limited to brandy, ½ oz., and port wine, 2 oz.; 5th, cod-liver oil in dessert-spoonful doses with quinine, as above, twice daily.

She has gained flesh largely, and has quite lost her pallid look; she can take long walks, though occasionally has pain over the right hip. Tongue clean; bowels regular; pulse 84; temperature 98·8° F. Cough slight and scarcely any expectoration. Physical signs:—Dulness upper third of left front chest, tubular sounds in first interspace; dulness upper third left back, with obscure cavernous sounds in intra-scapular region. The spinal curvature remains about the same, except that there is no longer any tenderness over the lower dorsal vertebræ. The measurement of the chest in the line of the nipple:—Right, 16 inches.; left, 13½. The heart's apex beats between the 4th and 5th ribs.

I advised her to continue the treatment in the country where she was going, adding 1 grain of sulphate of iron to each dose of the quinine tonic.

October 9th.—Has lost her cough, and gained strength and colour. No cavernous sounds can be detected in upper left lung, front or back. Chest measurements as before.

May, 1879.—Heard that she has lately died in India.

This case is instructive on account of the relative influences of the lung phenomena and the digestive processes on the pyrexia; and the question arises, what part each played. It may fairly be urged, that the persistence of high temperature after the enteric complaint had passed away was due mainly to supervening tuberculosis; but that this was not the sole cause is indicated, 1st, by the state of the urine, which was phosphatic; this condition, in my experience, not usually accompanying the pyrexia of phthisis; 2ndly, by the fall of temperature preceding the subsequent improvement of the lung disease.

If the pyrexia had been entirely dependent on the tuberculosis, this would not have been the case, for the fall in temperature would have coincided with the lung changes. We must therefore assign some share to the dietary and medicine.

With regard to the latter, as the dose of quinine was too small to be strongly antipyretic, it is more probable that any beneficial effect that arose from the saline mixture proceeded through promotion of secretions from the kidneys and intestines.

Therefore we are reduced to conclude that the dietary must have exercised a marked influence. It will be remembered that the patient had been given solid nourishment combined with ale and porter, and that on this dietary the temperature kept up and wasting steadily progressed, while when liquid food, with a small amount of brandy was substituted, the processes reversed, the temperature fell, and the child rapidly fattened. Moreover, at a later date, when a return to solid food had been established, a slight rise in temperature was checked by a diminution in the amount of solid food. The question of the reduction of pyrexia is an important one, and cannot yet be said to be solved.

I have tried for this purpose various drugs, viz. digitalis, aconite, belladonna, opium, arsenic, salicylate of soda, and quinine in large doses, with no permanent good results, though there has been an occasional temporary reduction of heat. This remark applies both to the pyrexia of tuberculisation and to the pyrexia of softening and excavation.

The treatment which I have found to be most generally successful has been similar to that advised in the present case; but where the temperature remains persistently high in spite of salines, small doses of quinine and liquid dietary, I have recourse to baths, which are used cold if the patient be sufficiently strong to bear them, and tepid for weaker patients, where a large amount of lung is involved, and these generally answer the purpose.

Dr. **Martin** stated the patient had been under his care with typhoid fever, and that suddenly one day the temperature had gone up to 103·5°, and had continued high ever since; he had noticed the extremely offensive nature of the evacuations. Quinine had been given which produced cinchonism; she had a slight cough, but no expectoration; he denied that she had had a bedsore as described by Dr. Williams.

Dr. **Dowse** asked if any albumen had been present; from what the author said he was inclined to disagree with his diagnosis, he believed the case was one of circumscribed pneumonic effusion, and not a case of tuberculosis at all.

Dr. R. J. **Lee** agreed in this opinion, and thought that the rapid diminution in the pyrexia was due to the quick absorption of the effusion which does occur in children, or else to the sudden clearing out of the lung tissue, as he noticed the fact of a cough was mentioned.

Dr. **Williams** did not believe that the sudden diminution of the pyrexia was due to the movement to Hampstead; albumen was never present; he had no doubt about the physical signs; it was neither a case of pneumonia nor a case of scrofulous phthisis, but it was a case of tubercular phthisis, and thus not followed by cavity, but by contraction of the lung tissue, which took place, in this case, towards the root of the lung; such tuberculous infiltrations have been more than once described by authors as the sequelæ of typhoid fever.

October 29th, 1877.

Francis Woodhouse Braine, F.R.C.S., Vice-President, in the Chair.

Dr. R. J. **Lee** read the following paper on

MATERNAL IMPRESSIONS.

It is probably within the recollection of some of the Fellows of this Society who are now present that we discussed the subject of "Maternal Impressions" about three years ago, when some of the effects which follow distinct mental disturbances during pregnancy were pointed out. The subject was limited to instances of peculiar deformity or abnormality in the offspring, referred to some particular object which had presented itself with startling effect to the mother, and had impressed on some part of the child a stamp of similar character. A more extended inquiry led the author to consider that women are not so liable to mental disturbance from objective causes as they are from those influences which are not of a material form, but act upon the mental feelings and excite different emotions of fear, anxiety, &c. If we reflect on the common causes which disturb our daily life we see how much oftener we are affected by those which are not of a material nature—sudden losses, exposure to danger, or violence, these are the common causes which disturb us, and the effects of this kind of mental disturbance are exhibited in a peculiar way when they occur as "maternal impressions." The mind of the mother has not been suddenly frightened by a distinct object which she has seen and regarded with fear or disgust, so that there is no reason to expect that the body of the child will bear any evidence of a mental impression of such a character as occurs in those instances. But considering the greater frequency with which we meet with mental and not bodily defects in children, with nervous disorders rather than local defects in bodily development, it is well to try and explain the more common class of cases before we attempt the more rare and difficult class. Since the subject was last discussed here several cases termed "maternal impressions" have been reported in the medical journals, and in the majority there has been an attempt to trace resemblance between the deformity in the child and the general appearance of the object which frightened it. This class of cases must be considered in connection with those where some particular part of the body of the mother has been affected, for there appears to be good reasons for concluding that when a distinct impression has been produced, not simply on the mind of the mother, but on some particular part of her body, the deformity in the child occurs in a corresponding part.

1. We have to consider these two classes of cases, those where the cause of mental disturbance has not been connected with any particular part of the body of the mother or with any distinct object which she has seen, but has resulted from a violent shock to the whole nervous system, as from exposure to serious danger or sudden mental distress.

2. We have as the other class, in their simplest form of "maternal impressions," those cases where some particular organ or part of the mother has been affected, as, for instance, in cardiac disease, laryngitis, or other local disorder without any disturbance of the mind, when the child is found to exhibit a congenital defect in a corresponding part or organ. Those instances of peculiar shrillness or hoarseness of the voice, for which some persons are remarkable, may sometimes be traced to such a cause; and there may be other

peculiarities, such as stuttering in speech and similar nervous disorders which are explicable in this manner. But, as we frequently have to deal with instances where both mind and body have been simultaneously affected, as for example, in a case where the right leg of the child was nearly twice the size of the left, the influences which act in both classes have to be considered. The author then related the following cases:

1. F., æt. 13 months, microcephalic, circumference of head 15½ inches. The legs rigid, eyes turned up. Frequently crying. The mother frightened in the fourth month by seeing a child run over.

2. F., æt. 13 weeks. Cardiac deficiency, loud, soft, systolic murmur at the heart's apex. The mother frightened by a high wind, which nearly blew her into the river.

3. M., æt. 3½ years. Is well developed, and can walk about well; cannot talk, is wilful and destructive; has the usual signs of imbecility. The mother was in the first stage of scarlatina when this child was born; there are five other children all healthy.

4. Æt. 3 months. Born prematurely in consequence of the mother being frightened by a skeleton in Westminster Abbey.

5. M., æt. 5 years. Intelligence deficient, did not walk till three years of age; expression fidgetty, and uncertain in movements, frequently falling; hears perfectly, but has a difficulty in articulation. The father paralysed for five years before the child was born, the mother received a fright a fortnight before the birth of the child.

6. F., æt. 2½ years. Congenital malformation of the heart, deficiency in septum ventriculorum, absence of thumb of left hand, head large, extremities blue, general cyanosis. Had fits of more than an hour's duration. Mother frightened by her hand being caught in a rat trap early in pregnancy.

7. F., æt. 7 years. Ten months after birth she was brought to the hospital on account of convulsive fits; free from them for three years; mentally weak and mischievous. The cause assigned by the mother was mental distress caused by the disgrace of her sister who was seduced.

Other cases also were quoted, among which especially worthy of notice was that of A. G. W—, æt. 2 years and 4 months. The child was healthy and well developed; the right leg was so much larger than the left in every respect that it might have belonged to a child nearly twice her age. Its proportion and the condition of the tissues appeared natural. The skin was rather darker in colour, and there were two spots about a quarter of an inch in length, close together on the outer side of the calf, where the cutaneous pigment was deficient and the tissue rather smooth and glistening. The right leg was ten and a half inches in circumference, while the left leg was six and a half inches. The temperature of the right was 99·4°, of the left 98°. The left leg was quite natural, well proportioned, and of proper relative dimensions to the rest of the body, while the right leg presented a striking contrast to it. The cause assigned by the mother was the circumstance of her being required to attend a case of phlegmasia dolens of the right leg in a friend of her own, who subsequently died after suffering from all the symptoms of that disease, the leg having been punctured on the calf in places corresponding to the two white marks on the child's leg. The medical practitioner who attended her in her confinement also had the care of the patient referred to. There were many minute details in the account received of this child which were singularly consistent with the belief the mother entertained of the cause of the deformity.

Mr. Braine thanked Dr. Lee for his admirable paper, and said it was only by collecting a large number of cases and reading them before the Society that we could arive at any definite idea as to the results of what are termed "maternal impressions." From the class in which Dr. Lee had derived his experience he believed that it would rarely be found that mothers had not received some violent shock during pregnancy.

Mr. Griffith referred to a case of hermaphroditism which he brought before the Society in 1875, published in the 'Proceedings,' page 25, Vol. III, which was thought to be a male but proved a female, and proceeded to narrate cases.

1. "Some time since," he said, "I narrated the case of a patient who gave birth to a child which had a bluish head, neck, hands, and wrists, for which the mother assigned the reason that being in the early stage of pregnancy she visited the Crystal Palace, when, as she strolled, she came suddenly upon what are known as the 'Japanese jugglers,' whose faces, necks, hands, and wrists, were dyed blue or black, the sudden shock affected her very much, and at the full time the child was born as described.

2. "Another patient, dropsical all over, gave birth to a monstrosity; the abdomen was enormously distended. During labour I had to tap the head of the child, then a large bag of fluid, and next the

abdominal cavity, and with the cephalotribe delivery was completed. On examining the fœtus a large bag of integument was found hanging down as low as the umbilicus, extending from one ear right round to the other under the chin, with the integument of which it was connected, as well as with that on the front of the chest. The mother's explanation was that during the Fenian riots in London a mounted policeman rode suddenly into a crowd, one of which she happened to be, and as he urged on his horse she looked up at the man and was terrified. She described him as having a cape on to keep off the wet, and considered *that* the reason her child had this pendulous cape-like bag.

3. "Another patient, being pregnant, answered a knock at her front door, when the person who knocked playfully thrust into her face a dead hare, the feet of which were tied together; after this, during her pregnancy, she feared some disfigurement of her child, and, true enough, the little one was born with the tips of the fingers and toes tied together with membranous bands, and the ends were covered with brownish fur; they withered, dried, shrivelled, fell off, and the stumps only were left. The child died.

4. "A lady frightened in the early stage of pregnancy by a visitor suddenly appearing at the door, threw up her hands in a manner demonstrative of fright; soon after the birth of her child she noticed that the only movement that it could make was the same up-throwing of the forearms. He is now grown up (18 years old), but has gained no further use of the limbs.

5. "Mrs. S— was stepping from her carriage to pass into one of the shops in Oxford Street, just as she alighted an ugly, decrepid, deformed little old man, suddenly emerging from a neighbouring court-yard, rushed towards and past her. He seemed eyeless and blind, with the nose meeting the chin, and toothless, the chin was in constant motion as the old dwarf mumbled words she could not understand. She was *enceinte*, and at the full time gave birth to a deformed child, closely resembling the object of her terror. Both before and after her second pregnancy she travelled constantly in order to shake off the horrible image which haunted her day and night. But no! the impress seemed stamped upon the womb, and another child cast in the same mould was born to her; of a third and fourth she was delivered, each bearing the hideous, dreaded stamp of age, decrepitude, and deformity. Under advice she avoided conceptions, and took a long tour, leaving her children at home and

taking every precaution to efface the recollection of her alarm. After her next impregnation she again left home, and strove to forget the blighting vision; she anxiously awaited her next labour pains, and at the birth of the next child was greatly rejoiced at hearing that it was a girl, free from blemish or deformity. The parents are fine tall people. Some of the children have grown up, and one of them known to me still bears the impression conveyed to her mother by the ogre-like figure that terrified her.

Dr. DE HAVILLAND HALL mentioned the case of a boy who was idiotic; and was the only child out of eleven in such a condition, his mother attributed the infirmity to a sudden shock she had received while pregnant.

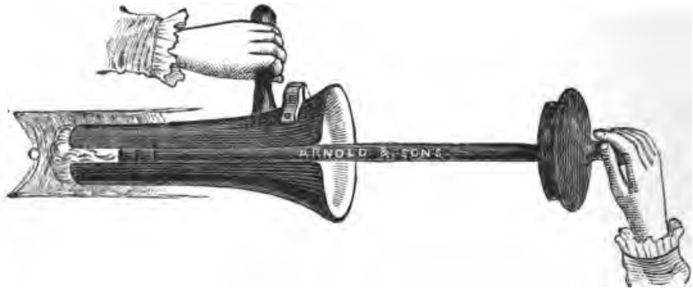
Dr. GODSON said that our chief difficulty was to steer clear of mere coincidences in discussing this subject. There was no doubt that impressions produced on the mother resulted in changes in the offspring "in utero," but how they acted it was impossible to explain. He mentioned a case of a girl who was in St. Bartholomew's Hospital; the mother stated that while pregnant she was walking along the street and a monkey jumped from an organ-grinder on to her back, this gave her a fright, and the child was born with a slightly withered arm, and the back, shoulder, and arm were covered with short hair.

Dr. FARQUHARSON thought the paper full of good and cogent reasoning; every one had heard stories similar to that just related, but reliable facts were difficult to obtain. Dr. Ashburton Thompson in his paper on "Generation" refers many of these cases to arrest or excessive development of the fœtus, and he was inclined to agree with this view; it was important to note the period at which the shock was received during the pregnancy.

Mr. NAPIER, Mr. MANVILLE, Dr. HEYWOOD SMITH, and others made remarks on the paper.

Dr. ROBERT LEE then replied that he was quite sure that the first class of cases referred to were the effect of mental impressions which produced mental defect in the offspring, and are far more common than was supposed, and most cases of idiocy could be set down to these causes. He gave other instances in support of this theory, and ended by saying he was quite sure that there were two classes of "maternal impressions," one producing lesions on the surface of the body, and the other the effect of change in the nervous and arterial system.

Dr. **Clement Godson** exhibited a new form of forceps for seizing polypi, &c., the principal feature in which consisted in a trigger-catch, which came into action as the instrument was closed. He also exhibited a new form of catch to a Zwank's pessary, which he thought overcame several objections in the other varieties of this instrument. He was anxious to take the opinion of the Fellows as to the application of the Zwank in the treatment of the procident uterus, as it has been lately stated at the Obstetrical Society of London "that this instrument is a very dangerous one, and therefore should never be used." Dr. Godson, on the other hand, maintained that it is the least dangerous form of pessary, because, with proper instructions, it can come as easily under the management of the patient herself as a hernia truss or a pair of spectacles; he ventured to submit that those who proclaimed against it had formed their opinions by the abuse, and not the use of the instrument.



Dr. **Godson** also showed an apparatus for introducing pledgets of medicated cotton wool against the cervix uteri. It enabled the patient to make the application herself without difficulty. One of the drawbacks to the usual form of instrument employed is, that it is liable to pinch in the vaginal wall; there is also a difficulty in letting free the pledget. Neither of these objections has been found in the instrument exhibited.

Dr. **Heywood Smith** considered the new Zwank a great improvement upon any hitherto manufactured, it was not only cleanly and durable, but possessed the special recommendation of being cheap. He agreed with Dr. Godson that, under proper management, the Zwank is one of the most useful pessaries in the treatment of procidentia.

Dr. **Rogers** had for many years made much use of Zwank's pessary, and was convinced that those who spoke against it had never given it a fair trial, they had jumped at the conclusion that it was dangerous because of some case in which an ill-fitting instrument may have been allowed to remain in the vagina so long a time that it had caused damage to the soft parts. He had himself seen an example of this, the pessary making its way into the bladder; it surely must be false reasoning to argue from this that the instrument should never be employed, any damage being entirely due to mismanagement. He congratulated Dr. Godson upon having succeeded in producing so improved a form of Zwank.

Mr. W. D. **Napier** said that he always had believed that pressure caused absorption, and he could not see how pressure could be avoided from the Zwank, for this reason he advocated the use of the pessary which, on a former occasion, he had exhibited to the Society.

Dr. **Lee** admired Dr. Godson's improvement, and thought that in many cases the Zwank was of great service. There were, however, some cases (particularly those in which the perineum had been ruptured) where it could not be retained, and for these Mr. Napier's pessary was well adapted.

November 5*th,* 1877.

J. C. **Thorowgood**, M.D., F.R.C.P., Vice-President, in the Chair.

Dr. **Greenhalgh** read a paper on the

TREATMENT OF DYSMENORRHŒA BY A NEW FORM OF INTRA-UTERINE ELASTIC STEM.*

Having assumed that intra-uterine stems are essential in certain forms of uterine affection, he proceeded to give an account of the various contrivances which have been devised from the time of Aëtius up to the present date, especially directing attention to the metallic bougies of different sizes first advocated and successfully used by Dr. Mackintosh, of Edinburgh, in 1836, to the permanent metallic bougies of various sizes of Sir J. Simpson in 1844, and to his non-perforated vulcanite and expanding stems of 1862.

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* This paper has been published *in extenso.* See 'British Medical Journal,' June 1st, 1878.

He then alluded to the division of the cervix uteri by a lithotome caché recommended by Sir James Simpson in 1844, and to his own double-bladed, curved, and straight metrotomes devised in 1862.

Having drawn attention to dilators of various heads, especially to Priestley's dilator, described in 1864, and to the use of sponge and laminated tents, he then proceeded to describe an india-rubber stem he had devised in 1872, which had proved far more successful in his hands than any of the means hitherto referred to.

He strongly urged the delay of mechanical treatment until all symptoms of active local disease were subdued. After alluding to the method of introduction, the time of retention, and the period for the removal of the stem, he stated that the cases in which he had found it most serviceable were—dysmenorrhœa, flexions, strictures, certain cases of fibroid and subinvolution of the uterus, and sterility.

He then briefly narrated some typical cases illustrative of the above affections, with the results, and concluded by observing that the stem usually occasioned a free mucous discharge, and not infrequently led to a copious and more prolonged loss at the period of menstruation, which, in cases where the stem has been worn some months, is apt to become offensive, but from which he had never known any bad results to ensue.

The author showed various forms of the stem to the Fellows.

Dr. **Wynn Williams** said that he had never used Dr. Greenhalgh's hysterotome, he always divided the external os with a pair of scissors, making no internal incisions, as he never found them necessary, the mechanical obstruction being always at the seat of flexion. He had found flexible stems certainly of great benefit, especially in retroverted conditions of the uterus. He doubted their good in anteflexions, especially in virgins. He showed his own stem, which was made of vulcanite, and was firm and unyielding; this he passed into the os of the uterus first, he then slipped on to the base of the stem an india-rubber shield, which, together with the stem, kept the uterus in position. He related a case where paralysis had apparently followed an anteflexion, and was cured by this instrument.

Mr. **Napier** asked why Dr. Greenhalgh had discarded the red india rubber for the pure black india rubber?

Dr. **Braxton Hicks** said he would not express any opinion on the merits of the paper, but merely say he could not understand how stems which were flexible could cure retroflexions and anteflexions of the uterus. Referring to the specimens exhibited he saw all kinds of twists and bendings resulting from their use.

Dr. **Routh** had frequently seen those instruments in use in patients under Dr. Greenhalgh's care. He did not advise the lighter form of stem shown, but preferred the broad and thicker one. These stems promote secretion, and in some cases they even produce menorrhagia. In consequence of this action the uterus is diminished in volume, and is thus brought back from its abnormal position. The late Dr. Squarey had, he believed, shown an instrument very similar to Dr. Greenhalgh's some years ago. Dr. Wynn Williams' stem was a good one, but he objected to the secretions being retained and so causing great offensiveness.

Dr. **de H. Hall** thought the case related by Dr. Wynn Williams was greatly mixed up with hysteria.

Dr. **John Scott** agreed with Dr. Routh that Dr. Squarey's instrument was very similar to that shown by Dr. Greenhalgh. He did not think flexible stems would cure flexions. He always used a straight metallic stem; these might be more troublesome, but they were certainly more efficient.

Mr. **de G. Griffith** said there was another use to which these stems had been put which had not been mentioned, viz. to prevent conception, and related two cases in point with deformed pelvis.

Dr. **Greenhalgh**, in reply, said he was at issue with Dr. Williams about the seat of stricture of the os uteri. Flexions, retro and anti, had been perfectly and permanently cured by the use of these stems. He believed Dr. Routh had hit upon the cause which produced this, viz. increased secretion from the uterus, which led to a diminution in its size, and so the displacement was cured by the uterus returning to its usual dimensions. He agreed with Dr. Hall that the case narrated by Dr. Williams was one of hysterical paralysis with anteflexion, and that the cure was due more to moral influence upon the mind than to the rectification of the misplacement by the stem. He had had a similar case under his care at St. Bartholomew's Hospital. In reference to a statement made by Mr. Griffith, he objected in the strongest terms to the use of the stem under any circumstances for the prevention of conception.

November 12*th*, 1877.

J. C. THOROWGOOD, M.D., F.R.C.P., Vice-President, in the Chair.

Dr. C. R. DRYSDALE read a paper on

SYPHILITIC PIGMENTARY AFFECTIONS IN THE FEMALE (WITH CASES).

He mentioned that in 1860 his attention had been forcibly drawn to the existence of pigmentary syphilitic eruption in the female sex by observing a well-marked example in a young woman, æt. 20, in whom the lower extremities became mottled in a most singular way by brown and white stains spread over the skin. Since that time he had seen many similar cases; and being at present physician to a small hospital with sixteen beds, connected with the Rescue Society of London, he had been much struck with the frequency with which young women suffering from syphilis were affected with this form of eruption. Out of forty-one cases of syphilis which had been in hospital recently, he had noticed the pigmentary syphilide on the neck in no less than fourteen, or about one-third of the cases. The description of this sort of skin disease is as follows:—There are stains of variegated white and brown colour, seen either on the neck or on some other parts of the body. The grey colour is somewhat less marked than is the case in chloasma, and resembles a weak infusion of coffee and milk mixed. These stains are not in any way raised above the surface, and are quite free from desquamation, so that it is clear that they are situated beneath the epidermis. The size of each stain apparently varies from that of a threepenny piece to that of a shilling, the edges being jagged. The patches are sometimes quite discrete, although they are generally united in agminated groups in the same region, and are confounded at their edges, so as in some cases to cover a very large extent of surface. Patches of white are seen amidst the grey stain, which are said by Hardy to be, and no doubt often are, whiter than the natural character of the skin in the region, and to denote diminution of the normal pigmentation. The stains may thus be rightly styled ephelis, since they consist of irregularly laid down pigment-cells in various parts of the surface of the skin. Many observers have refused to regard such pigmentary irregularities as at all connected with syphilis, and among others M. Bazin, for the reason that no antisyphilitic treatment seems to influence them. Dr. Drysdale, however, felt certain that such patches were syphilitic, since he alleged that such stains would never be found in any person but such as are affected with true syphilis, as would be shown in the cases he would speak of. The pigmentary syphilide is most commonly seen in the neck of women, which may be encircled by the patches, or they may only appear on one side. It is, however, seen in some well-marked forms, on the face or the front of the chest and abdomen, and on the lower extremities. He had seldom seen it on men. This syphilide continues almost indefinitely for years on some patients, but it eventually fades away. At times it lasts only a couple of months. As to treatment, no special drug seems to affect it. Mercury has not the slightest effect on it, iron, in his hands, very little. It is not a symptom of anæmia, but a true specific lesion.

As to diagnosis, two diseases are like pigmentary syphilide, viz. ordinary ephelis or "freckles," and chloasma. With regard to chloasma, its colour is yellower than that of the syphilide; it has a furfuraceous aspect, and is often itchy, which characters are absent in the syphilide. Freckles much resemble the pigmentary syphilide on the neck, and it often requires close attention to distinguish the disease. In ephelis, however, the stains are larger and more marked in colouration, and these are also less commonly noticed on the neck. Fourteen cases were then narrated as having been seen during the past two years in the Rescue Society's Lock Hospital in young syphilitic women.

E. G—, æt. 20, entered on 14th February, 1876, covered with a syphilide rash, and on 29th June she was noticed to have pigmentary syphilide of the neck, *i. e.* about three months after being first seen, and about seven months probably since infection.

Mary W—, æt. 17, entered hospital March 6th, 1876, with syphilitic sore and mucous tubercles, and a pigmentary syphilide on the neck was noticed on the 22nd June, about three months and a half after admission, and probably five months after infection.

Kate G—, æt. 21, entered hospital April 6th, 1876, and on June 26th a pigmentary syphilide of the neck was first noticed, *i. e.* two months and a half after having been seen, and perhaps four months and a half after infection.

No treatment had any effect on any of these cases, although very small doses of the green iodide of mercury were taken by all of these for five or six months. They had the eruption on the neck for nearly a year, or even more, but it gradually became fainter.

The eleven other cases were very similar in their histories, and in conclusion Dr. Drysdale remarked that, although he now gave mercury in doses of one sixth of a grain of the green iodide twice a day for sometimes six or seven months, he did so more for experiment's sake, and because the profession in general believed firmly that mercury cured syphilis and prevented the occurrence of tertiary symptoms, than from having himself observed that it much hastened the cure of the disease in the majority of cases. At any rate, he was convinced that the drug ought to be given in very small doses, and not at all in tertiary syphilis; in that stage ten or fifteen grains of the iodide of potassium was the remedy *par excellence* for gummy deposits in the throat, skin, or bones.

Dr. **Rogers** said that he had had considerable experience in the treatment of syphilis, and he had found that it was most important to pay attention to the general health of the patient before and while continuing specific treatment, viz. a mercurial course, for this purpose he had been accustomed to combine it with iron, bark, and other tonics.

Dr. **Fothergill** was glad to know that Dr. Drysdale had at last found the benefit of mercury in the treatment of syphilis. He agreed with Dr. Rogers, and generally advised the solution of bichloride of mercury with the muriate of iron.

Mr. B. **Carter** thought the subject of this peculiar syphilide exceedingly interesting. He did not think it pathognomonic of syphilis, and would ask Dr. Drysdale if he had not observed it in other cases, as in women who had their necks constantly exposed while at work? He thought much of the benefit to be derived from iodide of potassium in the treatment of immediate and extensive lesions. He had no doubt, however, that a cure could only be effected by mercury; this was especially demonstrated in military statistics. For his own part he should never feel he had performed his duty to his patient if he had not employed a long and continuous mild course of mercury, say from nine to twelve months. He mentioned cases in support of this argument.

Mr. **Astley Bloxam** thanked Dr. Drysdale for directing his attention to this form of pigmentary degeneration. He did not believe it to be pathognomonic, as, although having at the Lock Hospital a large number of cases constantly under his observation he had not seen this pigmentary change to any extent. He regarded it as a kind of leucoderma, and due to some nerve paresis. He had seen the same affecting the backs of the hands, the neck, and adjacent parts, and even the genital organs. In one case it had followed a distinct nerve-shock. Again, he would think if it were a syphilide it would yield to iodide of potassium or mercurial treatment. This evidently was not the case in the author's paper, as in no instance had any benefit been derived from any treatment. He fully concurred in Mr. Carter's opinion as to the plan to be taken for the cure of syphilis. He placed no reliance on the iodide of potassium for the cure of syphilis; it simply helped to place the patient in a better condition for the exhibition of mercury. As to the period to which a patient should be subject to a mercurial course, he believed that at least a year was required, oftentimes eighteen months. The specific should never be pushed to salivation, otherwise the patient suffers from syphilis plus the disease of mercury, and the control over the drug is lost for ever, and then we see the extensive ravages resulting from the combined diseases. He took objection to the green iodide as being uncertain in its action, producing, sometimes, sudden salivation, as Dr. Drysdale's cases showed, but preferred inunction or solution of bichloride of mercury with bark or, blue pill with opium.

Mr. **Griffith** thought the pigmentary degeneration was not syphilitic, as the therapeutic tests had failed. He mentioned cases of other allied bronzing following several causes. With regard to prostitutes not conceiving he considered it was due to enlargement of the uterus as a result of chronic irritation of its cavity.

Dr. **Gibbon** did not think this lesion was pathognomonic of syphilis, as he had seen the same changes follow in cases of ague.

Dr. **Thorowgood** thought a vote of thanks was due to Dr. Drysdale for his paper. It had caused an excellent discussion. He had no doubt himself in the efficacy of mercury in the treatment of syphilis, even in cases of phthisical patients where syphilis was present. He was glad to know Dr. Drysdale had become a mercurialist, and had had the boldness to avow it even at this late hour.

Dr. **Drysdale** thanked the Fellows for the way in which they had received his communication. He did not believe he could be wrong in his deduction that this change was a syphilide, as he had observed it in fourteen cases out of forty-one. He was glad to hear the experience of the Fellows as to treatment, and he should follow the advice tendered to him. It was especially interesting to hear the duration of time the mercurial course should be continued. This, he concluded, was most important. He was unable to explain why prostitutes did not conceive. He regarded it as one of "Nature's checks," as, otherwise, the workhouses would be overflowing with an infantile population.

November 19*th*, 1877.

J. C. **Thorowgood**, M.D., F.R.C.P., Vice-President, in the Chair.

Dr. **de Havilland Hall** exhibited a man with a

HORNY GROWTH FROM THE SKIN OF THE NECK.

It was large and had been present for many years. It had usually been shed each season, but this was not the case during last year, and in consequence the horn was very large. Beyond the peculiarity of its situation there was nothing very remarkable to note.

Dr. **Rogers** then related

TWO CASES IN WHICH CONGENITAL MALFORMATION EXISTED.

(1) The entire absence of the rectus abdominus, and the linea alba from the sternum to the pubis, in a boy, æt. 6 years. (2) The same deformity existing in a female, æt. 18, from the sternum to the umbilicus. The malformation was most apparent when the patients stood upright, the contents of the abdominal cavity coming forward and appearing as a large tumour. By the aid of mechanical support he was able to control the deformity and relieve the patients. He would ask the Fellows whether the female was to be prevented from marriage in consequence?

Dr. **Sansom** said this was not an uncommon case. The malformation was due to arrested development in fœtal life, where the parietes failed to unite in the medial line. Thus, the viscera were simply covered by a thin membrane and peritoneum. He had a similar case now under his care, which he should be happy to show if the Society thought it of sufficient interest.

Dr. Wiltshire had noticed similar conditions, and mentioned several cases. He considered that the only risk the female would sustain was the certainty that after delivery the belly would be extremely pendulous.

Mr. William Adams then read his paper on

INFANTILE PARALYSIS: THE CLINICAL HISTORY OF CASES WITH RIGID AND THOSE WITH FLACCID MUSCLES.*

The author in his paper especially referred to the clinical history of cases of infantile paralysis, distinguishing those characterised by rigid muscles, and frequently spoken of as spasmodic affections, from the other class distinguished by a flaccid condition of the muscles, and always recognised as examples of paralysis. He remarked that the cases of rigid muscles were occasionally met with at the period of birth, and were therefore spoken of as congenital, but they always occurred in connection with prolonged and difficult labour, and evidently resulted from acute congestion of the brain and upper part of the spinal cord, when some inflammatory changes occurred, and in one post mortem which he had made, thickening of the membranes and adhesions were found to exist at the base of the brain and along the medulla oblongata. In these cases, both the arms remain rigidly contracted, and such children are unable to walk or stand alone. In more severe cases the mental faculties are also weakened; the children frequently squint, articulate with difficulty, and sometimes dribble, so that they have a more or less idiotic appearance.

Similar cases, but generally in a less severe form, frequently occur between the ages of six and eighteen months, during the period of dentition, and are sometimes ushered in by convulsive affections. In some cases no cause exists, and these sometimes are supposed to depend upon an accident. Errors of diagnosis of this kind were then referred to by the author.

Cases of the second class included in the group of infantile paralysis are characterised essentially by a flaccid condition of the muscles paralysed. This is the typical form of infantile paralysis—the essential or spinal paralysis of children—described by recent authors, the rigid class first described not having been generally grouped with them. These cases never occur at the period of birth, and usually not until the first, and sometimes during the second, dentition. They are not infrequently the result of some febrile affection during infancy, and sometimes as late as five, and even seven, years of age.

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* This paper has been published *in extenso*. See the 'Obstetrical Journal' for February, 1878.

In the clinical history of these cases there are two remarkable facts:

1st. The suddenness of the paralytic seizure which, in its more severe forms, is calculated to occasion the greatest anxiety and alarm without any premonitory symptoms or previous illness, and,

2ndly. The tendency to spontaneous, and sometimes complete, recovery. Children, apparently in good health, are put to bed, and in the morning it is found that perhaps one, or may be both, legs are paralysed, or it may be an arm, or both arms, or perhaps an arm and a leg. Occasionally the paralysis is complete, involving both arms and both legs, as well as the muscles of the trunk.

Cases in illustration of the suddenness of seizure and tendency to spontaneous recovery were described. With regard to the seat and structural changes upon which this remarkable form of paralysis depends, the author relied upon and quoted the description given by Prof. Charcot in his recently published lectures upon 'Diseases of the Nervous System.' Under the head of "Lesions of Motor Nerve-Cells," Charcot observes, "Infantile spinal paralysis is, up to the present, the most perfect type of the affections which compose this category," and then he describes a condition of myelitis affecting the cornua of the grey matter of the spinal cord, and this existing to a greater or less extent, so as to admit of more or less recovery, satisfactorily explains the paralytic condition of the limbs affected. The author then detailed the points of difference and similarity in the two classes of cases. In both classes contraction and deformity occurred frequently at late periods, *i. e.* some years after seizure, but much might be done to prevent them by the daily use of passive exercise and shampooing. And the mild continuous current was useful in the class of flaccid, but useless in the class of rigid muscles, Where deformity had taken place from permanent contraction, tenotomy was necessary, but it should be practised with great caution, special care being necessary during the after treatment to secure good union of the divided tendon. In consequence of the feeble nutrition in the case of flaccid muscle, the reparative power is often defective, but by appropriate mechanical supports patients are often enabled to stand and walk in the cases where they could not have done so without such mechanical aid.

Dr. **Althaus** gave a description of the several causes producing paralysis in children; he was not inclined to regard the two classes of paralysis described by Mr. Adams as of different origin, they were essentially the same, and due to lesions in the anterior cornua; he then related the pathological changes as described by M. Charcot; he looked upon the rigid paralysis as ending when the nerve was but partially destroyed. Whereas in the flaccid condition the paralysis was complete, and this, he believed, was clearly shown by the pathological changes which took place in the paralysed limb; he considered great benefit followed the use of the continuous current in the flaccid variety, but it was little or no good in the rigid.

Dr. **Herbert Tibbits** said he had no doubt of the benefit to be derived from Faradisation and the constant current in the treatment of the flaccid variety, he had also seen good follow the application of the constant current to the sympathetic in the rigid class.

Dr. **Sansom** thought the paper most interesting, as helping us to form a more accurate diagnosis; he believed that eventually the lesion causing these forms of paralysis would be found in the circulatory system, and not in the nerve structure primarily; he adduced reasons in support of this argument.

Dr. **Lee** agreed with the pathological changes and deductions given by the speaker, but differed in opinion as to the special advantage of any one form of treatment; he commented on the so-called cures obtained from electricity; after several years close observation he found that the cases had a natural tendency to cure themselves, and he should not be inclined to trust to tenotomy or electricity to cure them.

Dr. **Allen Sturge** looked upon the morbid change in the two classes described as different. The flaccid being due to degeneration of the nerve cells consequent on inflammation. The rigid to changes in the neuroglia of a sclerotic character, and so leading to an irritable condition of the nerve centre.

Mr. **Adams** was happy that his paper had been so fully discussed;

he believed the rigid variety was due to myelitis of the grey matter. He agreed with Dr. Althaus as the pathological changes in the anterior cornua. He thanked Dr. Tibbits for the information he gave as to the value of the electric current to the sympathetic in the rigid class, and agreed with Dr. Sansom in looking upon the cause as central and not peripheral; he would not, however, accept his opinion that it was a vascular lesion without further consideration. He was well aware that many varieties of treatment were advocated for these especial forms of paralysis, and even to the present time in Germany blood baths were in use, and the wrapping of limbs in hot skins and fresh entrails employed. He, however, in his remarks had carefully avoided referring to the treatment, confining himself strictly to the clinical aspect of the disease.

November 26th, 1877.

GEORGE BUCHANAN, M.D., F.R.C.P., President, in the Chair.

Dr. SANSOM exhibited a Hypodermic Injecting Syringe, in shape with case about the size of an ordinary pencil-case; it appeared to be an ingenious and portable instrument.

Dr. WYNN WILLIAMS showed a child, æt. 3 months, in which a

LARGE NÆVOID GROWTH,

near the umbilicus and involving it, had been removed by elastic ligature. The history of the case was, that on the third day after birth a red mark, the size of a shilling, was noticed on the left side of the umbilicus; seven days after it had attained the size of half-a-crown, and subsequently it extended round the navel and involved it.

On the 1st November, when it was admitted into the Children's Ward of the Samaritan Hospital, it presented a florid, red appearance, and measured three and a half inches from above downwards, and three and three-quarter inches across, the tumour being raised half an inch above the integument. Two strong needles were passed through the integument, and under the growth, with an india-rubber ligature. The ligature was then passed round the growth twice and drawn as tightly as possible, and then fastened with a piece of lead. The mass was evidently strangulated at once. The child suffered no inconvenience, and the ligature completely cut through the growth, which separated on the eighth day. The only dressing applied was lint dipped in a weak solution of tincture of iodine.

Mr. **William Adams** considered the case eminently satisfactory as showing the effect of the elastic ligature, of which he could speak in the highest terms, the chief difficulty he found in using it was in fixing the ligature when tight, and the method employed by Dr. Wynn Williams was very good.

Dr. **Lichtenberg** showed a boy, æt. 15, on whom he had performed a modified form of

CHOPART'S OPERATION,

the peculiarity of which was, that he had left the scaphoid bone and half of the cuboid. The boy was admitted into the Tottenham Hospital, having received an injury to the foot, by its being jammed between a wheel and a post. The metatarsal and the cuneiform bones were completely smashed. He commenced his incision in front of the scaphoid, opening the cunei-scaphoid joint, and then carrying the incision outward, sawed through the cuboid and made a flap out of the structures of the sole of the foot. The boy made a rapid recovery.

Dr. Lichtenberg said that the advantage of this operation was, that (1) more of the foot was saved; (2) that the head of the astragalus was left supported by the scaphoid; (3) that the calcaneo-scaphoid and calcaneo-cuboid joints were left intact.

Mr. **Adams** thought the operation would be found useful in cases of injury, but he doubted the advisability of sawing through the cuboid in cases of disease, especially in strumous cases.

Mr. **Astley Bloxam** said this operation had been first performed by Mr. Hancock, and was recommended in his book on 'The Surgery of the Foot.' The case was as successful as could be. A similar result in a plaster cast was in the Museum of Charing Cross Hospital. He quite agreed with Mr. Adams, as in strumous cases the disease was generally distributed over all the bones of the foot, so that even Pirogoff's operation could not be performed, and surgery had usually to fall back on Syme's operation.

Mr. **Astley Bloxam** related two cases of patients who had consulted him lately for severe pain referred to the neighbourhood of the head of the radius following the constant playing of lawn tennis. The pain extended along the forearm and dorsum of the hand, and upwards along the course of the muscolo-spiral nerve to the brachial plexus. No disease of the radial joint could be detected, and the cause appeared to be due to violent supination of the forearm, in the act of cutting the ball over the net. He would ask the opinion of the Fellows as to the lesion whether it was due to inflammation of the muscular structure of the supinator radii brevis, or to an increase of its development, and so causing, when in action, sudden pressure on the posterior interosseous nerve which passed through it? Or whether simply neuralgic? He mentioned a similar condition following shooting, in which pain was referred to the left coraco-brachialis. Here, again, was a muscle pierced by a large nerve, and it had been constantly stimulated by raising the gun up in the act of firing.

Several Fellows related cases of injury which had followed the playing of lawn tennis, but no definite conclusion as to the precise cause of the pain was arrived at.

December 3*rd*, 1877.

George Buchanan, M.D., F.R.C.P., President in the Chair.

Mr. **G. de G. Griffith** narrated a case of Abdominal Tumour occurring in a child, æt. 2, and exhibited the same with the surrounding viscera.

Dr. **Woakes** read a paper on

THE CONNECTION BETWEEN STOMACHIC AND LABYRINTHINE VERTIGO,*

a continuation of the subject noticed by him at this Society last session, in his paper on "Ear cough."

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* This paper has been published *in extenso* in the 'British Medical Journal,' March, 1878.

He commenced by drawing attention to a form of vertigo differing somewhat from that known as Menière's disease, which has been so fully treated by Drs. Gower, Hughlings Jackson, and Ferrier. In this form the attack is sudden, without loss of consciousness, but also without any notable disturbance of the auditory organs. Dr. Woakes then referred to the vascular supply to the internal ear, this being from the vertebral artery, and the connection of the cervical sympathetic with the ear was fully detailed as showing how comparatively light aural derangements might lead to profound symptoms.

Similarly it was conceivable that irritation of the stomach might react through the vagus nerve and the sympathetic upon the labyrinth. The author considered that there was a perfect analogy between the shock propagated between a contused brachial nerve, with its concomitant vertigo, and the lesser shock caused to the nerves of the stomach by unmasticated food, and propagated thence to the same vessels and attended with the same symptoms, viz., giddiness. Dr. Woakes referred to the connection between the sympathetic and the vagus nerves, as explanatory of many of the symptoms of indigestion, *e. g.*, shoulder-tip pain. This might be due to distension of the supra-scapular nerve from the inhibitory dilatation of its minute vessels. His argument as to *modus operandi* of "vertigo e leso stomacho" may be given in his own words. "The injestion of the irritant gives rise to an impression which is conveyed along the afferent channels forming a communication between the pneumogastric nerve and the inferior cervical ganglion, whence it is reflected to the vertebral artery in the shape of a wave of diminished inhibition. This is equivalent to an increased flow of blood to the labyrinth, with corresponding pressure on the endo-lymph. Thus is produced giddiness, when the semicircular canals are involved alone; if the cochlea be also congested there is tinnitus. Deafness may be due to inflammatory effusion."

Mr. Dalby observed that the subject of the relations which existed between the auditory and pneumogastric nerves was full of interest, and called attention to many conditions in which this intimate relation was exemplified, especially referring to cases where the external and middle ear being healthy, loss of hearing occurred simultaneously with derangement in the function of the pneumogastric nerve. As to whether the labyrinth was in all such instances the seat of change was questionable, and it seemed, at least in some cases, equally probable that in the origin of the two nerves might be found an explanation of the symptoms which evidently pointed to a simultaneous derangement in the functions of both.

Dr. Gowers made a few remarks on the relation of the pneumogastric to the stomach with reference to reflex action on the labyrinth, and considered that the author had thrown out an ingenious hypothesis as to its connection with the inferior cervical ganglion.

Dr. Jagielski enumerated the following drugs as producing vertigo, viz., salicylicate of soda, belladonna, cocculus indicus, and nitrate of silver; some of these also produce peculiar movements, some persons falling to the left, and others to the right, side, and others again describing circles when attacked.

Mr. Cumberbatch remarked that the author in his paper had taken for granted that the centre of equilibrium was placed in the semicircular canals, although this fact is very uncertain. Section of the crura cerebri and pons was followed by many of the same symptoms; also it was difficult to understand how constant congestion of the semicircular canals should exist and not lead to impaired function of hearing? and that the tinnitus in many cases of stomachic vertigo, though the superior cervical ganglion might be due to vaso-motor paralysis and dilatation of vessels of the middle ear, these being branches of the carotid trunk.

Dr. Brandeis thought that many of the symptoms mentioned by the author might be due to plastic contraction of the tensor tympani muscle. He described the method of operation for its division, and gave a description of the effect of tobacco smoking on himself.

Dr. Rogers asked Dr. Woakes to explain why sneezing and sometimes violent blowing of the nose cause vertigo?

Mr. Lennox Browne did not think all the instances cited by Mr. Dalby could be taken as illustrations of the idea so well worked out in the author's interesting paper.

The cause of vertigo in the case of syringing the ears with water at too low a temperature or with too great force was not reflex, but was the result of shock to the labyrinth conveyed by direct pressure of the vesicles on the fenestra ovalis.

Again, where retching and vomiting resulted from syringing an ear in a state of suppurative catarrh with perforated membrane, the symptoms were not due to irritation of the pneumogastric or any of its branches, but to passage of pus or of the injected fluid into the pharynx by means of the Eustachian tube.

Mr. Browne would ask whether in the case of the patients quoted as suffering from stomachic vertigo the author had found the fall to be always in any one direction, and if so what explanation he would give. Of course, in aural vertigo such a fact was capable of explanation. The question involved a point of diagnostic interest.

Dr. Woakes, in reply, thanked the Fellows for the manner in which they had received his communication; he still held to his opinion that vertigo might result from irritation of the inferior cervical ganglion. He did not wish to enter into a discussion on the physiology of equilibration, but only to speak to its effect on the labyrinth. He had referred to the peculiar action of certain drugs, as tobacco, &c., and with reference to spasm of the tensor tympani producing tinnitus it was very common, but always associated with internal irritation, such as perforation. Why sneezing, &c., produced vertigo? it was probably due to muscular effort producing a sudden rush of air into the tympanum, and thus causing pressure on the membrane which closes the foramen rotundum and ovale, thus acting directly on the labyrinth.

December 10*th,* 1877.

George Buchanan, M.D., F.R.C.P., President, in the Chair.

Dr. Wiltshire exhibited specula made of toughened glass, and indicated their advantages. He threw three specula upon the carpeted floor of the room, and only one of these was fractured.

Dr. Lauder Brunton read a paper on

THE ABSORPTION OF FAT AND ITS USES, WITH SOME REMARKS ON FATTY DEGENERATION.*

The author began by referring to the feats of Johnson and Captain Webb in swimming across the Channel. The greatest difficulty they had to contend with was the loss of heat, and the success of the latter may be attributed to a thick coating of subcutaneous fat aided by the porpoise oil with which his skin was lubricated. In some animals, natives of tropical climates, the fat is collected in huge masses at certain parts, as in the zebra, the yak, the buffalo, and the camel. In the camel the hump is firm and solid when the animal is well fed, but when insufficiently supplied with food it becomes thin, loose, and flabby. In persons or animals when the fat assimilated is insufficient for the wants of the economy the subcutaneous fat becomes absorbed in order to avoid the waste of more important tissues. Fatty, starchy, saccharine and albuminous articles are all capable of being converted into fat. The fats themselves are partially emulcified as well as partially saponified by the pancreas, and passing through the lacteals, mesenteric gland, and thoracic duct into the general blood-current increase the amount of fat in the blood. Other articles of food will raise the proportion of fat when not taken in excess. The late Dr. Hughes Bennett used to say: "The main causes of tuberculosis were the dearness of butter and the abundance of pastry-cooks, the poor not getting sufficient fat, and the upper classes disordering the digestion by puff paste." The author thought that the instinct of those children who refused to eat fat was perfectly right, and said that if fat be swallowed under compulsion it would generally disagree. In such cases the proper thing to do is to give the fat in another form; the more finely the fat is subdivided the more is it enjoyed and the more readily is it digested. A piece of solid butter swallowed alone would melt in the stomach, float about without undergoing digestion, and probably begin to decompose and yield acrid fatty bodies, which would irritate the stomach and cause sickness. The best time to give cod-liver oil is an hour or so after instead of immediately after a meal, as it will then have a shorter time to stay in the stomach, and will pass out quickly into the duodenum. The oil is better given in the form of an emulsion with gum acacia rather than with solution of potash or carbonate of potash, because the gum is little if at all affected by the gastric juice, whereas the potash will be neutralised, and its emulsifying properties destroyed so that the particles of oil can again run together. Many opinions have been advanced regarding the ready digestibility of cod-liver oil. Some have sought for its cause in the fact that this oil contains propyline in combination with fatty acids instead of glycerine like most other fats. Others, again, have attributed it to the minute quantities of iodine, and others to the biliary matters found in the oil; the last seems to be by far the most reasonable supposition. It appeared to the author that in bronchitis, both acute and chronic, a little cod-liver oil is much more serviceable than cough mixtures, as well as in phthisis, in which disease it is so generally employed. After a trial of various things the author found that fat bacon is one of the most satisfactory things upon which to perform hard mental work; the nervous system containing a great proportion of fat must necessarily suffer if fat be deficient from the food. In persons of gouty temperament in middle age we often find sugar in the urine. The author thought that this should be called gouty glycosuria rather than diabetes. The cause appears to be that the oxidation in the body is insufficient to consume all the substances taken as food, such as sugar and fat; uric acid being deficient, fat is accumulated; and this deficiency of oxidation leading to the accumulation of fat in the subcutaneous cellular tissues or about the viscera may also lead to fatty degeneration. Whenever the supply of oxygen to the tissues is diminished, either by impoverishing the blood of the red corpuscles, or by lessening the flow, fat or fatty degeneration is likely to ensue. This may be observed in women after excessive flooding, and insufficient oxidation leading to fatty degeneration is seen in the muscles of a paralysed limb, when want of exercise has nearly stopped the flow of blood, or, in the heart, where it has grown too big for the coronary arteries to supply it.

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* This paper has been published *in extenso*. See 'Practitioner,' vol. xx, p. 167.

Dr. **MILNER FOTHERGILL** agreed with the author, that some patients can take one form of fat, while other kinds are more readily digested; in other cases he said that, in his opinion, it did not matter which was taken.

Dr. **LEARED** mentioned a case of persistent vomiting due to pressure on the pancreas, in which globules of fat, covered with crystals, were vomited. He stated that patients who had oleine did better than those supplied with margarine and stearine, and did not suffer from constipation. In his opinion, brown oil was the better form for administration, as it really is an oleine.

Dr. **JOHN BRUNTON** recommended the inunction of olive oil in wasting diseases in preference to cod-liver oil, on account of the smell of the latter.

Dr. **THEODORE WILLIAMS** thought that the author should have laid more stress on the use of milk. He thought that the best time for taking cod-liver oil was immediately after food. His experience was in favour of the lighter oil. He agreed to the early use of cod-liver oil in bronchitis, and stated that liquor ammoniæ was better than the liquor potassæ for emulsifying cod-liver oil. An emulsion thus made, when flavoured with oil of carraway or cinnamon, was not at all disagreeable. He thought that the author might have referred to some of the English observers, *e.g.* Mr. Gulliver and Dr. Quain.

Dr. DE HAVILLAND HALL suggested tragacanth in place of acacia for the cod-liver oil emulsion, and spoke in favour of the inunction of cod-liver oil.

Sir JOSEPH FAYRER asked how far the use of animal oils, such as whale oil, seal oil, &c., would prevent the occurrence of scurvy, and referred to the immunity of the Esquimaux from that disease?

Dr. JAGIELSKY spoke of the advantages of koumiss when milk cannot be digested. He asked if the efficacy of cod-liver oil were not due to the iodine it contained.

Dr. ROGERS advised suet pudding and cod-liver oil to be given in emulsion of almonds.

The PRESIDENT asked Dr. Lauder Brunton whether he had not laid too much stress on the colour of the oil as an indication of the amount of bile it contained?

Dr. LAUDER BRUNTON, in reply, stated that the colour of the oil was no test as to the amount of bile, except that the dark colour indicated a mode of preparation which favoured the liberation of the biliary principles. He differed from Dr. M. Fothergill inasmuch as he thought that cod-liver oil was distinctly better than other oils. He agreed that the practice of inunction was good, and thought that animal were better than vegetable oils; he suggested neat's foot oil as having little smell. He deferred to Dr. C. T. Williams's larger experience in the use of cod-liver oil. He thought the chief factor in the cause of scurvy was an excess of chloride of sodium in the blood. He did not think iodine had much to do with the efficacy of cod-liver oil.

December 17*th*, 1877.

GEORGE BUCHANAN, M.D., F.R.C.P., President, in the Chair.

Dr. **ANDREW CLARK** read a paper on

THE PROGNOSIS OF MITRAL INSUFFICIENCY.

In bringing forward the subject of his paper, Dr. Clark remarked that a considerable amount of hospital practice without a large amount of private practice, was apt to lead one to acquire the habit of a fatal prognosis, and to attach to the name of a malady the judgment which belongs entirely to its final and not necessary issues. We must remember, however, he said, that in dealing with hospital cases we are usually ignorant of the duration of the disease, and we often fail to realize and to estimate at their just value the effects of the unfavourable conditions in which too often the poor are placed. It was to general practitioners, he said, of long standing, and who possessed the faculty of critical observation, that we must look for help in settling the vexed question of prognosis, and he suggested that though they had not the time to give to literary composition, yet they might do much to clear up the matter by giving answers to well devised questions. Dr. Clark then proceeded to consider the question of prognosis in mitral regurgitation. What the prognosis was forty years ago was illustrated by several cases. One was that of a gentleman who was condemned to die in less than six months, and who, forty years afterwards, was alive and in the enjoyment of good health. Another, that of a gentleman who, in 1835, had a loud mitral systolic bruit with slight congestion at both bases, and who is now in his eighty-fifth year in the enjoyment of fair health. What the prognosis of mitral regurgitation was now could, he said, be learned only with difficulty from the writings of eminent authorities, and their statements were most conflicting. Still, on the whole, Dr. Clark believed that prognosis had become more favourable, and that the grounds for forming a favourable prognosis were being brought steadily to light. That the fact that children with what seems organic valvular disease grew up to be men and women who, to all appearances, enjoy excellent health, tends to this view. In order to calculate the prognosis of a given case, Dr. Clark urged attention to the following points:—The family history of the patient, his age, his previous and present health, his habits, occupation, and general surroundings; the character and condition of the murmur, the state of the heart as to dilatation or hypertrophy, and especially the state of its muscular tissue. The following points were enumerated as being against a favourable prognosis:—A family history of heart disease, or of gout or rheumatism; a history in the patient himself of gout, rheumatism, gravel, ague, or other affections which sensibly influence the condition of the heart; the habit of dietetic indulgences, especially the habit of "swilling large quantities of fluid," laborious callings, life in a damp low situation, &c. Dr. Clark pointed out strongly that of all single conditions acting unfavourably on the prognosis of this malady deterioration of the muscular substance of the heart is the worst. Dr. Clark next touched upon the chief factors which appear eventually to bring about a fatal issue in cases of mitral regurgitation, viz. pulmonary and renal congestions, failure of ventricular power and progressive dropsy, and he stated that they exercised their influence more speedily or more slowly as they are helped or hindered by the favourable or unfavourable conditions. Dr. Clark remarked that the relative place occupied by mitral insufficiency in the general prognosis of valvular disease differed with different observers, and was extremely difficult to determine with exactitude. On this head Dr. Clark said, "For my own part, I think, that to form a just estimate of the place of this malady in the scale of prognosis, it must be divided into two stages. In the first stage, that is before failure of compensation, and reckoning suffering to be endured as well as peril to be incurred, it is perhaps the most grave. The only exceptions to this would be in cases of aortic constriction and regurgitation with anginal complication. Passing on to consider the conditions which justify a favourable prognosis, Dr. Clark thought, we may venture to say, that if in a given case of mitral regurgitation the family and personal history be moderately good, if the murmur be stationary, if the muscular power of the heart be unimpaired, if there be little or no secondary complications, and if the patient be willing to place and keep himself in favourable conditions, the health might be indefinitely kept up without material influence with ordinary duties and enjoyments of life. The requirements necessary for the maintenance of health were shortly these—A simple and not overabundant dietary with sufficient intervals between meals taken at regularly recurring times; moderation in the use of red meats, abstinence from beer, cider, and other sour and sugar-begetting drinks, the sparing use of any form of alcohol, which, if taken, should only be taken with meals, maintenance of the due action of the bowels, avoidance of violent exertion, of hurry, and excitement, of getting chilled when heated, of causes which bring about the rheumatic state, of the excessive drinking of liquids, of the free use of acid fruits, of dwelling upon the actions and conditions of the heart, and, lastly, the cultivation of an orderly, occupied, cheerful, and tranquil life. Dr. Clark concluded by remarking that though these particulars might seem too trivial for serious enumeration in such a society, yet, when we remember that it is mainly through the long and continued influence of little things in our daily lives that disease is begotten or health maintained, we cannot think so, and that no physician can adequately discharge his duties to his patients who disregards them.

Dr. SEMPLE opened the discussion by saying that he had read a paper in 1850 arriving at the same conclusions as that of the author. He had not one word of opposition to say, but he felt bound in justice to himself to assert that nothing new had been put forward; on one point alone would he dwell, and that was the case related by the author of a gentleman æt. 80, he had often examined the patient in question, and he doubted whether any mitral disease existed at all.

Dr. THEODORE WILLIAMS congratulated the Society on the presence of Dr. Andrew Clark among them again, and he agreed thoroughly with his remarks; the question of age he considered the most important, in his experience he had found that when mitral disease commenced between the ages of 15 and 18 less tendency existed for it to become progressive, such he found was not the case when it occurred after 40.

Dr. SYMES THOMPSON thought Dr. Andrew Clark's suggestion that the President should issue a code of questions for the general practitioners of the United Kingdom to answer was a good one, as nothing was more important than for physicians to be able to give a true prognosis in the various forms of heart disease. Our means were mainly restricted to hospital cases, and these being generally fatal lead us probably to erroneous conclusions. He would take exception to the second class of cases referred to by the author, in which enlarged liver, albumen in urine, and the loud murmur existed, as being always most fatal. He had known digitalis, on more than one occasion, relieve all the symptoms enumerated.

Dr. **Fothergill** related several cases of mitral disease which had existed for several years causing few, or scarcely any, symptoms. He would like to ask the author the prognosis of tricuspid regurgitation with mitral disease; he stated the fact that he had found mitral disease more common among girls than boys, and he would ask whether Dr. Clark had observed the same, and if he could explain this fact, as he could not.

Dr. **Broadbent** said he did not think the question before the Society was how long people could live with mitral disease, as it was clearly shown they could do so for twenty, thirty, or forty years, but the question was, How are we to distinguish between these cases? (1.) It appeared to be most important for prognosis to ascertain whether the disease was progressive or not (2.) to ascertain the actual amount of regurgitation taking place. How is this to be distinguished? He believed mainly by the amount of dilatation and hypertrophy of the heart. Simple regurgitation alone he regarded as unimportant, but regurgitation with stenosis was most important; then, again, whether the regurgitation is consequent on disease of the valve or in the ventricle itself. He would place mitral disease as quite the lowest in the scale of mortality.

Dr. **Sansom** stated the fact that endocarditis might exist for any period without producing symptoms, this he had clearly demonstrated to be the case, especially among children, and as this was the case he could not see how it was possible for us ever to arrive at an accurate prognosis.

The **President** pointed out that a great body of evidence had already been accumulated from the experience of practitioners generally throughout the kingdom, not, indeed, evidence as to the prognosis of particular lesions, nor yet of a sort that was available in the case of a particular patient, but, nevertheless, it was evidence of value as to the expectation of life in heart disease, and it went strongly to confirm the theory propounded by Dr. Clark. It would be admitted that the causes of heart disease were incomparably most activê during the first thirty years of life, and a very large proportion of such diseases dated back even to the time of childhood and adolescence. But when the registration statistics were examined as to the period of life at which death from heart disease occurred, it was found that ages over 55 exhibited considerably more than half of the total mortality from those diseases, and this was the fact, although the actual number of people living at ages over 55 was, of course, far smaller that the number living at earlier ages. With this interval between the period of maximum production and the period of maximum fatality of heart disease, not in selected classes of the community, but with inclusion of all the classes, the inference appeared inevitable that the expectation of life was not so seriously diminished by the presence of heart disease as used at one time to be supposed.

Dr. **Andrew Clark** in reply said he was not aware before then that Dr. Semple had anticipated the facts he had related, and had arrived at the same conclusion as himself, but he was glad now to know this as it confirmed his own views. However, the literature on this subject appeared to him very loose, especially on two points. 1. As to the prognosis; 2. As to the best means to be employed for prolonging life. He agreed with Dr. Williams that the age at which the disease first presented itself was a matter of vast importance as to prognosis. In answer to Dr. Thompson as to the fatality of the second class he mentioned he had not seen such good results follow the use of digitalis, although he had given it in heart disease for years; latterly we had been better able to discriminate when this drug should be exhibited, mainly through the excellent essay on therapeutics written by Dr. Fothergill; and in reply to that gentleman he was not aware that mitral disease was more common among girls than among boys, nor could he explain why it should be so.

January 7th, 1878.

George Buchanan, M.D., F.R.C.P., President, in the Chair.

Mr. **Francis Mason**, F.R.C.S., delivered his first Lettsomian Lecture on the Surgery of the Face.

Lecture I.—DISEASES OF THE FACE.

January 14*th,* 1878.

George Buchanan, M.D., F.R.C.P., President, in the Chair.

Mr. **Wordsworth** read notes of six persons having

CONGENITAL DISPLACEMENT OF THE CRYSTALLINE LENS

in one family, viz. a grandmother, two sons, and their three children, as follows.

Instances of congenital displacement of the crystaline lens are sufficiently rare to be worth recording, and especially when, as in those I am about to describe, a series of such malformations occur in a family. In addition to the interest of these cases, *per se*, is the fact that the defect has been transmitted through three generations to seven persons, and there is also a strong presumption that the condition has occurred *ten* times in *five* generations successively. If this be so, I believe it is the most extraordinary series on record.

It is almost certain that four of my series were seen, and have been described by my worthy colleague, Mr. Dixon, in the first volume of the 'Royal London Ophthalmic Hospital Reports.' In this record I do not intend to consider the many interesting questions of anatomy, physiology, and treatment of them, but shall confine my remarks to a narration of the details of our observations. For the notes of the cases I am indebted to my very able clinical assistant at the Moorfields Hospital, Dr. Morton.

The following cases show in an extraordinary manner the transmissibility of congenital malformations; the deformity being the displacement of both crystalline lenses, occurring in three generations, and very probably in five, being found in ten individuals, of whom six are exhibited. Sketches have been made of the abnormity.

The first case is that of Mrs. H—, æt. 59; the second that of her eldest son, George, æt. 37; the third that of William, æt. 35, her second son; the fourth and fifth those of Maude, æt. 10, and Alfred, æt. 5, children of George; and the sixth that of George, æt. 7, son of William. The family recognises perfectly those amongst them who have the defect, and those who are free from it, and our examination has confirmed their opinion in all who submitted to it. Hence some credence may be given to the statement of Mrs. H— that her father, his youngest brother, and her grandfather all had the same defect of vision as herself, and also that her youngest son (who is now in New Zealand) is similarly affected. It is asserted that Mr. Dixon examined this son many years since, and, if so, this was one of the four cases he described.

Mrs. H— was the eldest child of her parents, and had four brothers and one sister, none of whom had any defect of vision, nor had any of their children. Of her own children, the eldest three sons were recognised as having her defect of vision; the two eldest having been examined by us, and their condition sketched. Her daughter (who had been examined) and two younger sons are free from the defect, as well as the four children of one of the sons, and one child of the daughter.

George, the eldest son, is affected, and has four children, of whom Maud, the first, and Alfred, the third, are affected, the second and fourth children are free. George, the eldest child of William, is affected, and the rest of his children, two daughters, are free. Mrs. H—'s third son (who is in New Zealand) is said to have the defect, and his only child to be free.

The whole of the individuals affected have a peculiar appearance about their eyes; they complain of being near-sighted, and some of them state that they have to arrange their eyes when wishing to see any object minutely. In all of them the irides are tremulous, especially at those parts where the support of the lens is absent. In all the lens appears rather white and opalescent by oblique illumination, and, as seen in the erect image by the ophthalmoscope, the fundus oculi appears under the different conditions of myopia when viewed through the crystalline, and of hypermetropia when the crystalline does not intervene. Corresponding with this, when using their eyes for distant objects, in George, William, and Maud (who were more particularly tested in this respect), there was divergence of the covered eye on looking at test-letters at twenty feet, but with the observing eye these letters were seen through the space beyond the displaced crystalline, and on employing artificial lenses the eyes deviated inwards with a convex lens, and outwards with a concave. In reading they used the myopic refraction. After using atropine, by a careful examination with oblique light, a delicate striated membrane was seen reaching from the edge of the lens in a radiated manner towards the ciliary region, apparently an elongation of the suspensary ligament.

Annexed is a tabular statement of the mode of displacement, &c., of the cases.

	Displacement.	
Mrs. H—, æt. 59	R. E. upwards and inwards; L. E. ditto	Irides light brown; lenses becoming opaque. Vision $= \frac{20}{200}$ scarcely, and J. 1 at 8″. With atropine and $\frac{1}{4}$ lens v. $= \frac{20}{50}$. " $\frac{1}{2}$ " J. 1 at 6″.
George H—, æt. 37	R. E. inwards; L. E. inwards and slightly downwards	Irides grey-blue. Vision, R. E. $= \frac{20}{200}$ nearly, and J. 19. With $\frac{1}{20}$ lens v. $= \frac{20}{70}$, and with $\frac{1}{3}$ J. N. at 6′. L. E. $= \frac{20}{200}$, and J. 1 at $1\frac{1}{2}$″ With $\frac{1}{14} = \frac{20}{50}$, and with $\frac{1}{3} =$ J. 1 at 5″.
William H—, æt. 35	R. E. upwards and inwards; L. E. inwards	Irides brown. Vision, R. E. $= \frac{20}{200}$, and J. 1 at 2″. With $\frac{1}{3\frac{1}{2}}$ v. $= \frac{20}{50}$, and J. 1 at 8″. L. E. v. not $= \frac{20}{200}$, and J. 1 at 2″ with $\frac{1}{3} = \frac{20}{100}$. With $\frac{1}{3\frac{1}{2}} = \frac{20}{50}$, and J. 1 at $5\frac{1}{2}$″.
Maud H—, æt. 10	R. E. inwards; L. E. ditto	Irides grey. Vision, R. and L. $= \frac{20}{200}$, and J. 1 at 2″. After atropine with $\frac{1}{12}$ v. $= \frac{20}{100}$, and " $\frac{1}{2}$ " J. 1 at 4″.
Alfred H—, æt. 5	R. E. upwards; L. E. upwards and inwards	Irides grey. Vision not proved.
George H—, æt. 7	R. E. upwards and outwards; L. E. upwards and inwards	Irides brown. Vision not proved.

Mr. STREATFEILD said he had had a case of this kind about a year ago, which in a practical point of view had interested him very much. An intelligent little girl, æt. 9 years, was brought to him at the University College Hospital for short-sightedness, and the displacement of the lenses in this case was almost symmetrically upwards, so much so that when the pupils were in their natural state she looked through the extreme lower margin of the lenses. She was myopic, and could only read No. 200 of Snellin's test-types at twenty feet. With concave lenses No. 12 she could read No. 70. She used these glasses for some time and went back to school, where she got on better than before, but her mother, hoping more could be done for her, brought her again to the hospital. The pupils were dilated with atropine, and the greyness of the misplaced lenses (which was well seen in some of Mr. Wordsworth's cases), and the clearness of that part of the area of the pupils unoccupied by the lenses, suggested to him the trial of strong convex glasses, such as are generally used after the removal of the lens in cataract operations. With convex No. 3½ she could read No. 40 at twenty feet, and with No. 2½ she could read a book very much more comfortably than with any other glasses she had had.

Mr. Streatfeild made a small iridectomy downwards in each eye. The case did very well, and with the strong convex glasses above mentioned for distance and for near vision she could read No. 40 at twenty feet, and could read well and thread her needle, which she could never do before. And this improvement has continued from that time. Since the operation was performed Mr. Streatfeild has learned that De Wicker, of Paris, some years ago had made an artificial pupil, not by iridectomy, but by iridesis, in one of these cases.

Mr. Power said the cases mentioned by Mr. Wordsworth were exceedingly interesting, especially to him. With regard to the question of development he would have expected the lens to have occupied the lower portion of the globe, instead of this they were all placed upwards and inwards. He was decidedly opposed to any operation in these cases.

Mr. Carter stated he had had several cases of this kind under his care. One, in which he had removed the lens by absorption. Vision, however, was not remedied by this operation, and he agreed with Mr. Power in believing the best results followed dilatation of the pupil, with suitable glasses.

Mr. Wordsworth in replying stated that he was not disposed to perform any operation in any of these cases. His experience of operations in such cases coincided with that of the previous speakers, viz. that it was inexpedient to operate for the removal of the displaced crystalline from the eye, and that the only operation that is feasible has for its object the placing the pupil beyond the free edge of the displaced lens, so that the patient may use his eye as if he had no crystalline lens. In all these cases considerable amelioration could be obtained by means of optical appliances.

The PRESIDENT then called on Dr. Richardson to introduce to the Society

Dr. FOULIS, of Glasgow, who brought forward a case of

EXCISION OF THE LARYNX

and exhibited the man on whom the operation had been performed. He said: "This operation may be said to be still on its trial. I believe it to be a justifiable procedure, and if I can assist in placing it on the list of accepted operations I shall have attained the object I had in view in bringing it before you. The mortality after the operation has hitherto been very high; four years ago when Billroth performed the operation on man for the first time for cancer, his patient died of recurrence three months after, but he lived long enough to prove that a certain period of relief could be obtained by the operation, and that an apparatus designed by Gussenbauer, and since called 'Gussenbauer's voice tube,' could be made to replace the actual vocal organs in a fairly satisfactory manner. Billroth's second case died on the ninth day after operation, of pneumonia. Then Heine, of Prague, operated, and his patient succumbed in six months to a recurrence of the cancerous growth. After this Moss operated on two cases, one of which ended fatally of pneumonia fourteen days after, while of the other we have no public account. In 1874 Schmidt, of Frankfort, lost his patient by collapse on the sixth day, and Schoenborn's patient, an old man, æt. 72, was carried off by pneumonia four days after the operation. Bottini, of Turin, in 1875 was more successful, the last report of his case showing that his patient was alive and well six months after the operation. In the same year Langenbeck, of Berlin, performed the operation for cancer of the larynx, but we had no account beyond the eighth day. In March, 1877, Kosinski, of Warsaw, removed the larynx of a patient for cancer, and at the end of the second month the patient was in good health; and in September last I excised the larynx of the patient whom I have now the honour to show. These are all the cases of total excision of the larynx with which I am acquainted, and from this list it will be seen that of eleven cases in four years four terminated fatally a few days after operation, two died of recurrence of the cancer in three and six months respectively, of two there is no proper record, and that only three cases are stated

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[1] This case has been published *in extenso*. See 'Lancet,' vol. ii, for 1877, p. 532; vol. i, for 1878, p. 118; vol. i, for 1879, p. 436.

to be alive at the end of a few months from the date of excision. This is a dark picture, but it is rendered less so by a consideration of the cases. All of them have been instances of malignant growths, some of them extensive cancerous masses. Three were cases in elderly men, and the operation has always been delayed until it was a last and almost desperate resource to free the patient from the disease. In such circumstances a very modified success only could be looked for. The principal danger in the days immediately following the operation is pneumonia, four of the cases succumbing to it in the first fortnight. It is difficult to say precisely what has been the cause of that pneumonia. It may have been due to the copious rush of cold air through the open trachea into the lungs. But I ascribe it rather to the trickling of blood and other fluids into the air-tubes, and the subsequent irritation and inflammation in the lung-tissue. And that this has been the opinion of those who have operated is evinced by the precautions which they recommend to be taken, in order to prevent the fluids from the wound entering the air-passages. Some of them have used Trendelenburg's tampon, an ingenious arrangement by which, after preliminary tracheotomy, a small hollow ball of india rubber is inflated in the trachea. Others, especially Billroth, speak in depreciatory terms of this instrument, which, they say has been rather in the way than otherwise. One objection to it, which seems to me of great weight, is, that it necessitates a considerable prolongation of the wound downwards, and thus adds to the gravity of the operation. Rose suggested, and Maas adopted the suggestion, that the head of the patient should be lowered during the operation, by which means the blood would tend to flow away from the open trachea instead of into it. But this gives rise to a certain engorgement of the head and neck, which is objectionable from the increased amount of hæmorrhage it might cause. Again, Bottini has proposed the use of a fenestrated knife heated by the electric current, with which he has been able to excise, neatly and successfully, the larynx in the dog. It would be difficult with such a knife to form an exact estimate of the nature of the tissues being cut, and this, at the edge of a cancerous mass, might be of very great importance with regard to early recurrence. These considerations led me to adopt the following method in the case under notice:—I made a single straight incision from the hyoid bone to the second ring of the trachea, carefully separated the soft parts with the knife from the laryngeal box, first on one side and then on the other, cleared the first ring of the trachea and pulling it well forward cut the trachea clean across. Into the open trachea I then inserted one limb of a curved leaden tube thickened by india rubber so as to fit the air-tube pretty closely. The trachea being thus protected the dissection out of the laryngeal box could be effected quietly from below upwards. The operation was carried out very leisurely to allow oozing of blood to cease before each important step was taken, and the whole procedure occupied two hours and a half. The curved leaden tube was left in the tracheal wound for twenty-four hours, until large tubes were procured, which could be trusted to prevent any fluid from escaping into the air-tube. No dressings were used except a loose layer of wet lint, as I wished to avoid anything like retention of fluids in the wound. Five days after the operation the patient could swallow fluids, and on the twelfth day he was able to swallow soft solid food which rendered unnecessary any further feeding by the œsophageal tube. A fortnight later I began to make attempts to introduce the voice tube sent to me by Reiner, of Vienna. This apparatus consists of two tubes fitting into each other. Into the upper tube slides a silver case containing a vibrating reed, which, when set in motion by the air-current from the lungs, emits a musical note. This note is modified into vowels and words by the mouth. I soon found that the tube which I then had would not answer the purpose. It was too small, and the curve was not such as would fit the wound. In this difficulty I was indebted to Dr. Irvine and Mr. Foulds for invaluable assistance. From a model by Dr. Irvine, Mr. Foulds was able to produce a tube which fitted the wound exactly, and this having been improved on since, the patient is able to speak with ease. The tube is made on the same principle as that of Gussenbauer, but of an improved shape. Much interest attaches to the question of the reeds which produce the voice. When these are changed the quality or timbre of the voice is altered, indicating that the timbre of the natural voice is greatly dependent on the degrees of elasticity and other properties in the vocal cord. Reeds of horn, metal, vulcanite, &c., are made and used by this patient himself. Another interesting point is, the pitch of the note emitted by the reeds. When the sound is sent forth from the aperture in the tubes in the front of the neck, it is sharper and higher than when, the front aperture being closed, it is sent through the mouth."

Before showing the patient Dr. Foulis gave a short account of the previous history of the case. The man, æt. 29, came under his care in March, 1876, and had suffered a whole year from gradually increasing hoarseness, and complained of a frequent sudden interruption of the voice, often in the middle of a word. He could not shout. There was neither pain nor difficulty in swallowing. A small growth was detected on the under surface of the left vocal cord at its anterior end. At Dr. Foulis' request, Dr. George Buchanan kindly removed this growth by cricotomy. A year later the growth returned, and Dr. Foulis removed it again by thyrotomy, using the actual cautery to the seat of the growth. Seven months later the recurrence of the growth, in a form extending more rapidly, induced Dr. Foulis to remove the larynx as described.

The patient made a good recovery, and is now in better health than he had been for some time before the operation.

Dr. Brandeis at the invitation of the President opened the discussion. He said that, " many years ago, Professor Langenbeck, in speaking of carcinoma of the larynx, remarked that if ever he had the opportunity he would extirpate the organ for the relief of the dyspnœa and dysphagia. This remark induced Czerny, at the time the assistant of Billroth at Vienna, to make some experimental operations on dogs to determine whether the larynx could be excised with impunity. The results were deemed sufficiently favorable, although the majority of the animals experimented on died shortly after from pneumonia, to induce Professor Billroth to extirpate the larynx of a man suffering from malignant growth in the spring of 1873. The patient had been under the treatment of Stoerck, who endeavoured to diminish the size of the tumour by application of nitrate of silver; failing in this he sent the man to the surgical wards of the hospital, where a thyrotomy was done, and the entire contents of the laryngeal cavity were enucleated, the cartilages were seared with the galvanic cautery, and the wound closed. Several months after, the growth having reformed, Professor Billroth was obliged to reopen the wound. The infiltration being extreme he felt that a second enucleation would not be sufficient to clear the growth away, and determined to extirpate the larynx, which was accordingly done. The fatal issue of the cases of pneumonia may be explained by the fact that the disease had reduced the vital powers of the patients operated on to such a degree that they were unable to rally from the shock of the surgical interference. Carcinoma of the larynx being a primary disease in almost all cases, there is no reason to doubt that extirpation of the organ will prolong life indefinitely if the operation be performed before the obstruction and thickening has advanced too far. The modification to a partial resection, as performed by Professor Heine, of Prague, and its application in stenosis of the larynx in consequence of syphilis, promises a most satisfactory solution of a condition which heretofore has been almost intractable. The dangers of pneumonia may also be avoided by doing a preliminary tracheotomy, and thus accustoming the patient's lungs to the introduction of atmospheric air which has not been previously warmed.

Mr. SAVORY said that the physiological side of this case presented so many new features that being called on suddenly he felt that the best compliment he could offer to the author was the respect of silence; three things, however, struck him. (1.) The remarkable fact that the whole larynx could be removed and the patient recover. (2.) That two columns of air being set in motion by the reed in the laryngeal apparatus yet produced but one note, however, he might be in error as to this condition. (3.) The lucid manner in which Dr. Foulis had brought the case forward.

Prof. LISTER stated that he had been consulted by this patient before Dr. Foulis performed the operation. The man had then enlarged glands in the neck, which he thought due to malignant infiltration, and accordingly advised *no operation*. Dr. Foulis, however, considered the enlargement to be due to irritation the result of former operations, he was glad to say that Dr. Foulis was right, for when he examined the patient just now he found no glandular enlargement existing. He acknowledged the superiority of Dr. Foulis' bent lead tube over the other vulcanite tubes, and he thanked the author for the admirable manner in which he had exhibited the patient.

Mr. LENNOX BROWNE said that in judging of the advisability of any operation certain elements must enter into consideration. (1.) Do the symptoms justify it? (2.) Is the operation dangerous? (3.) Is it radical? With reference to the first point there was doubtless impairment of respiration, but for mere alteration of voice the procedure would be quite unjustifiable. That the operation was dangerous there could not be a doubt, since six patients out of eleven had died of pneumonia or the immediate results of the operation, and in no case of carcinoma had life been prolonged more than six months. Nor would the operation on account of cancer be considered radical, for although it was perfectly true that this disease, commencing as it did primarily in the larynx, respected other parts of the body, the dyscrasia once manifested was seen to be again exhibited, and unless the whole pathology of cancer was different in the larynx from that of other parts of the body the disease must recur. Lastly, was there any less serious operation? In Dr. Foulis' case it was true that less severe measures had been first tried, but in syphilis, if the stenosis was in the larynx, tracheotomy was equally efficacious. If below the glottis, a point often very difficult of diagnosis, removal of the larynx was as useless as tracheotomy. In cancer, again, life might be prolonged very considerably by tracheotomy, and Fauvel had shown from an experience of thirty-seven cases that the average duration of life after tracheotomy for encephaloid cancer was three years and nine months, whereas without tracheotomy the disease terminated fatally in about three years, and that in the much more common disease of epithelioma tracheotomy prolonged life by four years, whereas without it the patient died in twenty-one months. Could it be shown that extirpation of the larynx offered an equal amount of hope.

Dr. **Richardson** considered that from the physiological aspect this case would require months of careful study before he could speak for five minutes about it; he would simply thank the author for his triumph in surgery.

Dr. **Morell Mackenzie** was most interested in the case as he had seen the result of some of Billroth's operations. He thought this case was another evidence of the advantage to be obtained by vivisection, for had it not been for those early operations on dogs this magnificent surgical result could never have been obtained. It was evident that the apparatus had not the power to produce modulation, he suggested that the addition of another reed might do this.

Dr. **Foulis** replying expressed himself flattered by the reception that had been given to his case; the operation was justifiable, as affording relief where life was almost insupportable. Further experiments would be made as to the modulation of the voice.

Mr. **Adams** proposed, Mr. **Thos. Bryant** seconded, and the **President** having put it to the meeting, a cordial vote of thanks was accorded to Dr. Foulis by acclamation.

January 21st, 1878.

GEORGE BUCHANAN M.D., F.R.C.P., President, in the Chair.

Mr. FRANCIS MASON, F.R.C.S., delivered his second Lettsomian Lecture on the Surgery of the Face.

LECTURE II.—INJURIES OF THE FACE.

January 28th, 1878.

GEORGE BUCHANAN, M.D., F.R.C.P., President in the Chair.

Dr. LEARED read notes of a case of

TYPHOID FEVER SUCCESSFULLY TREATED WITH STIMULANTS.

I am induced to bring the following case of typhoid fever before the society because it was instructive in several particulars, more especially as illustrating the value of the alcoholic treatment.

A dark complexioned healthy man, æt. 40, was on the evening of October 22nd, seized with sudden and very severe abdominal pain, the focus of which was the right hypochondrium. The pain lasted for three days, and was unattended by diarrhœa. For three weeks from the time of seizure he was up and dressed daily, although too weak to attend to his duties.

By the 24th day of his illness he had fallen into a very low condition; diarrhœa had then existed some time, the characteristic eruption was seen on the body, the urine was highly albuminous. The patient was perfectly deaf. The respirations were hurried, and fine crepitation was discovered posteriorly in the bases of both lungs, while the sputa were blood tinged; the pulse and temperature were both high.

Four days from this time the prostration and dyspnœa from increased lung congestion were so intense, and the heart's action was so rapid and feeble, that death was imminent. At this critical juncture a very profuse hæmorrhage from the bowels took place, after which the patient, blanched and almost pulseless, seemed to be dying. I then directed that a little strong beef tea and a glass of sherry should be given every hour. This was done regularly for fifteen hours, by which time the flickering pulse had regained volume, and had fallen to 120 in the minute, while the respirations were only 36 in the minute. After this time the amount of wine was gradually diminished, and the patient made a good recovery.

The unusual mode of attack was the first point of interest in this case—a sudden access of pain resembling, in its severity and location, and in being unattended by diarrhœa, the effects of gall-stone.

The second point of interest was the removal of the urgent and almost fatal lung congestion by the spontaneous bleeding, indicating that even in very low states of the system bloodletting may not be always out of place.

The third point, and one of special interest at the present time, was the large amount of alcoholic stimulant taken by the patient. Here was a patient so near dissolution that it must have been inevitably induced by a slight impulse in the wrong direction. Now, it must be admitted that the effects of a bottle of wine, taken within a short period when life was at so low an ebb, would have exercised great power either for evil or for good. It is impossible, indeed, to conceive that, under the circumstances, there could have been anything like indifference to its action in the system. But if for evil the extinction of life must speedily have ensued. If, on the other hand, the free exhibition of the stimulant was followed by invigoration of the patient, the inference is irresistible that life was saved by it.

The case is also instructive as one in which impending death from one cause was averted—by the bleeding. But nature's cure must have ended in death from another cause, namely, exhaustion, except for the assistance of art. It was not an instance of nature versus art, but of art coming to the aid of nature.

The comments upon the use of alcohol are of course not offered as a general proposition in its favour as a life-saving agent, a thing so well known to the profession. They are intended as a small contribution to an exact knowledge of its great powers, a knowledge that an attempt is being made in certain quarters to ignore. For have we not at the present time in our midst a hospital from the practice of which the use of alcohol is rigorously excluded?

Dr. Rogers said he had almost given up the use of stimulants in the treatment of typhoid fever, but occasionally he was compelled to use them, and with the happiest results.

Mr. Bloxam asked whether the large doses of alcohol produced any sudden change in the temperature, and what was the highest point the temperature reached in this patient. He also asked if the same result would not have followed the giving of large doses of quinine. He then narrated a case of severe typhoid fever which had been under the care of Dr. Green, at the Charing Cross Hospital.

Dr. Semple said that he had for a long time treated cases of typhoid fever without the use of alcohol. He would neither trust to it alone, nor withhold it altogether; he had seen much benefit follow its use in certain cases.

Mr. Royes Bell gave an account of a severe illness he had incurred from a poisoned wound, followed by scarlet fever, and described the benefit he had derived from the free use of stimulants.

Dr. Wiltshire said the question before the Society was not the giving of alcohol always in typhoid fever, or in always withholding it, but whether it was not at times the only means, as in Dr. Leared's case, by which the life of the patient could be preserved. No doubt could be entertained but that alcohol, under certain condition, as in the present case, was absolutely necessary. One point of interest was that the onset of the fever was ushered in by severe pain; another, whether the improvement of the lung mischief could not be traced to the severe hæmorrhage from the bowels.

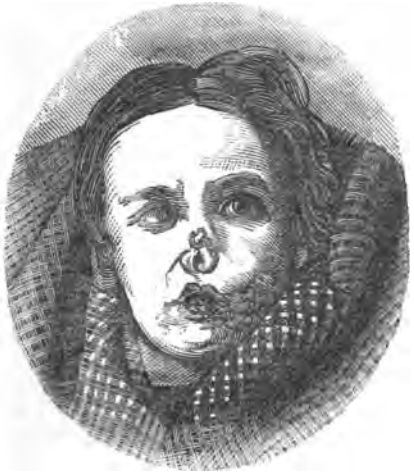
Dr. Edmunds stated that he never gave alcohol at all; he treated typhoid fever without it, and was successful with his patients; he doubted the great benefit which had followed its administration in the present case, and he dilated on the disadvantages of beef tea.

Dr. Leared thanked the Society for the way in which his small paper had been received. The highest temperature shown in this case was 103°, which rapidily fell when alcohol was pushed. He thought it better to give stimulant, not in the form of ammonia, &c., but in brandy and wine. He did not for one moment contend that typhoid fever should always be treated with stimulants, but when the pulse begun to fail it should be immediately administered. He detailed the experience of Dr. Stokes, of Dublin, who always advised stimulants when the heart-sounds became inaudible, or nearly so; in consequence, it was his habit to pay considerable attention to the sounds of the heart, as to the importance of which no one present had made any suggestion.

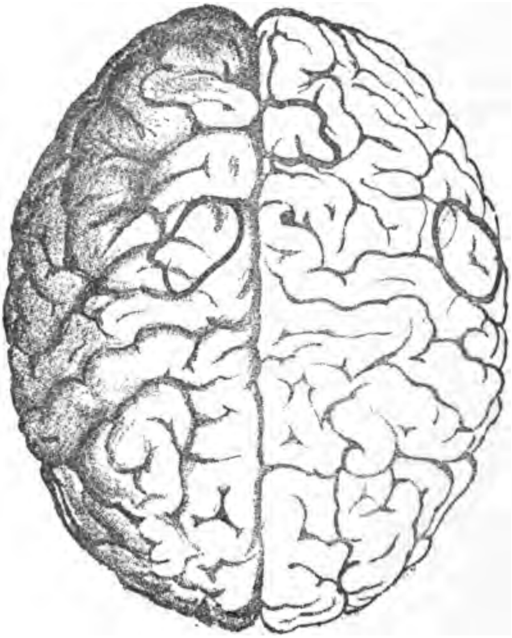
Dr. Dowse then read a paper on

HEREDITARY SYPHILIS AS IT AFFECTS THE BRAIN AND NERVOUS SYSTEM.

He said: In this paper, which I have the honour to read to you this evening, I feel that I am dealing with a subject concerning which little is known, and I cannot do better than preface my remarks with the following statement which was made by Mr. Jonathan Hutchinson in his ever memorable address at the Pathological Society on the 1st February, 1876. He said: "Let us note that the conditions which chiefly attract attention in the tertiary stage of acquired syphilis are almost wholly absent in the subject of hereditary taint. The paralysis of single muscles of the eyeball, or of those of the face, the attacks of hemiplegia and of optic neuritis, with which we are so familiar in subjects of acquired disease, are, I think, never seen in the inherited form." The author then commented on the fact that the occurrence of changes in the nerve centres in congenital syphilis



was only recently recognised, and stated at length his reasons for believing that many cases of so-called scrofulous disease were really the outcome of inherited syphilis. After referring to Dr. Barlow's case of gummata in cranial nerves, related in the last volume of the Pathological Society's Transactions,' Dr. Dowse gave details of a similar case that had fallen under his own observation. The patient was a fairly well-nourished girl, twelve years of age, admitted into the Central London Sick Asylum, in November, 1874. She was one of four living children, none of whom were healthy. There was a history of syphilis on the father's side, and the mother, who had had several miscarriages, and three of whose children had died in infancy, was said to have died of phthisis. The child herself was healthy till five years of age, when she had ophthalmia and ozæna, and in 1872 she had a fit, and was unconscious for four hours. Then followed an eruption of a tubercular syphilide, commencing at the side of the nose and rapidly ulcerating; the tip of the nose was destroyed before ulceration healed. Nervous symptoms then became



prominent, commencing with headache, followed by epileptiform attacks, diplopia, and swelling of the optic discs. As to the cranial nerves, there was loss of smell, anæsthesia of left half of face, and paralysis of the right sixth and left seventh facial nerves; the third and fourth pairs were not involved. Death occurred finally after a number of epileptic attacks, in which the right side was slightly more involved than the left. Towards the close of life she became aphasic, and there was some paralysis of the right arm. Adhesions existed between the dura mater and the surface of the brain in the parietal regions, and gummatous growths were found on the upper part of the superior parietal lobule, and on the left side on the posterior parietal lobule and the supra-marginal gyrus. The arteries at the base of the brain presented endarteritic changes, as described by Huebner, and the left fifth and seventh nerves were thickened, swollen, of a deep pink colour, and of a toughened gelatinous character. The liver and kidneys were lardaceous.

Two other cases were also related.

February 4th, 1878.

GEORGE BUCHANAN, M.D., F.R.C.P., President, in the Chair.

MR. FRANCIS MASON delivered his third and last Lettsomian lecture.

LECTURE III.—DEFORMITIES OF THE FACE.

At the conclusion of which Mr. GAY proposed, and Mr. MAUNDER seconded, that a cordial vote of thanks be given to Mr. MASON for his excellent course of Lectures. Carried unanimously.

February 11*th*, 1878.

George Buchanan, M.D., F.R.C.P., President, in the Chair.

Mr. **Spencer Watson** showed a girl, æt. 20, who was brought before the Society two years ago ('Trans.,' vol. iii, p. 8), to illustrate the result of excision of the astragalus for an injury.

Dr. **Kelburne King** of Hull related the following case of

AORTIC AND INNOMINATE ANEURISM.

E. C—, æt. 37, was admitted a patient of the Hull Infirmary October 16th, 1876, in consequence of a pulsating tumour at the right side of the root of the neck. He had served as a soldier six years in India, had suffered from syphilis, and had been a great spirit drinker. He had felt occasional pain in the back before he went to India, but on the whole he had enjoyed good health there. On returning to England he frequently complained of pain from the pressure of his knapsack, but he continued to do his duty, in spite of this, from the year 1871 to 1874, when he came under surgical treatment. He was admitted into the Hull workhouse in that year, where Mr. Dex, the surgeon to the institution, compressed the right carotid artery by means of his wire compress. Considerable relief followed this operation for a time, but he eventually became worse, and consulted the author in October, 1876. He was then suffering from severe pains shooting upwards to the back of the head and running down to the back part of the right shoulder; he also had a constant irritating cough. There was no affection of the voice, no difficulty in swallowing, nor when at rest had he any dyspnœa. On examining the root of the neck there was a distinct pulsating tumour, and the pulsations of the right carotid and subclavian arteries were full and distinct, rather more so than was natural; the former vessel was perfectly pervious; the pulse at the right wrist was natural, but that on the left side was much diminished in force. Beneath the pulsating tumour of the neck there was decided dulness over a space of about three inches in length, and throughout it there was a loud bruit, which diminished in intensity as the distance from the tumour increased, and disappeared as the region of the heart was approached. The heart sounds were healthy. From these symptoms, and from the fact of there being a clear space, both on percussion and auscultation, between the aneurismal sound and those of the heart, the author concluded that this was a case of aneurism of the innominate artery. Absolute rest, unstimulating diet, and large doses of iodide of potassium were prescribed, but no relief followed; indeed, his sufferings were increased, and he was most anxious to submit to any treatment which might afford a chance of relief; he was impatient of pain and indifferent to risk. Under the circumstances, the only operation Mr. King considered likely to be of use was that of distal ligature of the common carotid and third portion of the subclavian. Of nine recorded cases, it appeared that one (Fenn's) survived four months, one (Heath's) four years, one (Hutchinson's, of Brooklyn) recovered from the operation but died from suffocation on the fourth day, and one (Sands', of N. Y.) recovered from the operation, but the disease was not cured; the other five cases died. In three of these cases the operation was performed by double consecutive ligatures, and by simultaneous ligatures in six; two of the former and three of the latter died from the effects; the balance, therefore, was in favour of simultaneous ligature, but in this case the author would have preferred this mode of operation, fearing lest the disease might extend into the artery left unligatured. On the 9th December, 1876, the author placed a catgut ligature on the common carotid, and another on the third portion of the subclavian. The operations were performed antiseptically, and there was nothing to remark about them except that the ligature of the carotid was more tedious than usual, in consequence of the knotting together of the tissues, caused by the former operation of compression, and that in taking up of the subclavian the small vein was running in front and across the artery (to which Mr. Maunder calls attention in his 'Surgery of the Arteries,' p. 30). The ligature was placed around the carotid first, but not tightened until after the subclavian was exposed, so that the stoppage of the arterial flow in both vessels was as nearly as possible simultaneous. The ends of the ligatures were left hanging out of the wounds, which were dressed with carbolic gauze. On the 14th December the parts of the ligatures external to the wounds dropped off, and on the 18th both wounds had healed. There was no cerebral disturbance after he recovered from the effects of chloroform, nor, indeed, had he any symptoms indicating the important nature of the change which his circulatory system had undergone. The pains was much relieved from the first and gradually disappeared entirely. The pulse at the right wrist became discernible but feebly, a week after the operation. Pulsation was felt at the bifurcation of the right external and internal carotids three days after, and it was soon plain that free anastomosis between the right and left external carotid had taken place. The pulse of the left wrist, whose feebleness was attributed to pressure in some way made by the aneurism in the left subclavian, did not improve after the operation. The pulsating tumour in the neck felt firmer, gave a considerably less impulse to the fingers, and extended over a smaller area. But the most marked improvement was in the general symptoms. The pain and cough by degrees disappeared altogether. The patient submitted to restraint for some weeks, but became fractious in temper, impatient, and insubordinate, and finally made up his mind to leave the hospital, insisting that he felt better than he had done for some years, and his purpose could not be changed by any remonstrance; accordingly he was dismissed, or, rather, dismissed himself, on Saturday, the 24th of February, 1877.

On Tuesday, the 27th, he agained returned: he had been in a continual state of intoxication during the interval; he felt miserably ill. Along the region of the carotid there was greatly increased pulsation, with redness of the skin and tension of the adjacent parts. On the 27th March an abscess open at the seat of the lower part of the scar over the carotid; this was followed by hæmorrhage, which recurring frequently, wore him out, and he died on the 30th March, 1877, 111 days after the operation.

It would have been impossible under the circumstances to have removed the preparation entire from the denuded anterior part of the bodies of the 5th and 6th clavicle vertebræ formed by a part of the posterior wall of the aneurism. Jutting out from this innominate aneurism was an appendage passing to the front of the carotid and communicating with the remains of the abscess of the neck. It was from this that the hæmorrhage took place, and to it, therefore, was to be attributed the fatal result.

The explanation of the deficiency in the left pulse afforded by the post-mortem is one of the most interesting features of the case. About an inch above its origin the calibre of the artery is seen to be reduced by internal deposition to an opening merely sufficient to admit a probe, so that the supply of blood to the heart and both arms was, after the tightening of the ligature, very nearly limited to that conveyed by the left carotid and by the branches given off by the first part of the right subclavian. The history of this case proves that, even where the disease is so extensive, the distal operation may greatly alleviate the symptoms, and when the patient is moderately careful may indefinitely prolong life.

Mr. **Bryant** said this was an eminently satisfactory surgical result, as showing the value of the distal operation in aneurisms of the aorta and innominate. These operations evidently give relief to the distressing symptoms, even if they fail to prolong life. The profession, after the several cures that have been performed of late years, could not but acknowledge the justifiability of its performance. He mentioned two instances in which he had performed the distal operation for thoracic aneurism. What he considered was wanting was an earlier diagnosis, so that the operation could be performed in time to cure the disease; whereas now, the operation was one advised for the relief of distressing symptoms only.

Mr. **Owen** related the case of a double ligature for innominate aneurism, which Mr. Jas. Lane performed some few years back, which had evidently prolonged the life of the patient, as he eventually died of pleurisy some years after. This case had apparently been omitted from the records of these operations.

Mr. **Maunder** thought the difficulty was the question of diagnosis. He would leave this to be answered by the physicians, as he was not certain of the diagnostic signs of early innominate aneurism from a purely aortic one. He would question the desirability of ligaturing both arteries simultaneously; he thought some help could be obtained as to which artery should be ligatured, if pressure was first applied on its trunk, so as to ascertain if the aneurismal sac receded or became empty. He would then be inclined to apply the ligature to that artery alone.

Mr. **Bloxam** was anxious to know whether the patient had had syphilis or not. He mentioned in detail the four cases in which the distal operation had been performed by his colleague Mr. Barwell at the Charing Cross Hospital. He then described the condition of a patient on whom he propose to perform the distal operation for aortic aneurism, and asked as to the advisability of ligaturing the left subclavian as well as the left carotid, ligaturing the latter alone in one case not having been apparently sufficient.

Dr. **Richardson** treated on the medical aspects of cases such as

Dr. King had brought forward. He said that in the early part of his career he was strongly in favour of treating such forms of aneurism by operation; a more matured experience had led him to modify that opinion. It was true that the diagnosis of aneurism had now been brought to great perfection, and that so far as diagnosis was concerned the surgeon had everything in his favour. But the value of the operation became in his mind doubtful as experience ripened in respect to cases that were treated with and without operation. The fact is, that physicians not unfrequently see the most tempting forms of aneurism for surgical interference go on well without such interference. From such instances two of subclavian and two of innominate aneurism had come under his care; in a most unexpected manner the pulsation had ceased, a new circulation had been set up, and recovery, equal to any that could have followed operation, had occurred. On the other hand, such cases of the kind which he had known to have been subjected to operation, three in number, had, like Dr. King's case, succumbed from the operation. He did not wish to discredit the operation altogether, but when we saw it fail in such skilful hands as those of Dr. King, and when we saw recovery without operation, in some instances quite unexpectedly, Dr. Richardson's own inclinations were towards persistence in medical treatment rather than to resort to surgical procedure. He thanked the author for his candour in giving the details of his case and for the admirable surgical ability he had displayed.

Dr. Douglas Powell thought the observations that had just fallen from Dr. Richardson answered Mr. Bryant's remark as to the reluctance of physicians to call in surgical aid until late in such cases. But he did not agree with Dr. Richardson in deprecating operative interference altogether; on the contrary, having fairly tried the influence of rest, diet, and drugs, and having found them to fail, he would most decidedly advocate operative interference, since it had been clearly shown that life had been by this means secured or much prolonged. Deligation of the muscles in these cases must be regarded, however, as a severe operation, and not hastily undertaken. It was, of course, a matter of some importance for ultimate prognosis, although it did not necessarily negative the probable usefulness of the operative measures, to decide whether the aorta was involved. In this case the dulness over the upper sternum suggested aortic disease, and he would ask Dr. King whether the second sound over the aortic valves was strongly accentuated and accompanied by a second impulse or jog over the aneurism? a sign he had found to be very characteristic of aortic aneurism. A diastolic murmur would, of course, have been sure evidence.

Dr. KELBURNE KING thanked the Society for the way in which his short paper had been received and discussed. He felt sure that the operation had relieved the main distressing symptoms, as he was able to walk about; that it had prolonged life was perhaps doubtful. But we must not forget that the patient was, as he stated, a continual acute drunkard.

Dr. ALTHAUS read a paper on

DISEASE OF THE ANTERIOR CORNUA OF THE SPINAL CORD.

He commenced by stating that the more our knowledge of the affections of the cord increased the more abundant appeared the crop of fresh problems springing up at every step, and for which we were, as yet, totally unable to offer a satisfactory solution. This was illustrated by the present state of normal and pathological histology, of the phrenology, and experimental pathology of the organ, particular attention being drawn to the artificial production of myelitis by Leyton, Hamilton, and Frieberg. The author then proceeded to discuss the function and histology of the anterior cornua and the changes they underwent in infantile paralysis, acute and chronic myelitis of the adult, amyotrophic sclerosis, and progressive muscular atrophy. The pathology of infantile paralysis was fully gone into, and the curious phenomena elicited by faradisation and galvanisation of the paralysed nerves and muscles were described. These were found to correspond closely to the degenerative changes which were developed in the nerves and muscles after they had been separated from their centres in the anterior horns; and it was shown that destruction of these centres had the same effect on the nerves and muscles under their influence as a break in the continuity between the centre and the peripheral nerves, as in injury of the latter. In both these conditions the faradaic excitability of the nerves and muscles and the voltaic excitability of the nerves were lost, while the voltaic excitability of the muscles was increased at an early period of the disease, and generally persisted to some extent, even at a late period, being then the only sign which could be elicited of the vitality of those parts. Dr. Althaus then related two cases of acute anterior polio-myelitis in adults, in one of which the lumbar, and in the other of which the cervical, enlargement of the cord had been the seat of the disease. The symptoms in both cases were exceedingly well marked, there being fever with quickly produced paralysis, loss of reflex excitability, and peculiar faradaic and other voltaic phenomena, while sensibility of the bladder and rectum did not suffer, and there was no tendency to decubitus. In both cases the exciting cause was cold. The diagnosis from hæmorrhage into the spinal cord, acute central and transverse myelitis, progressive muscular atrophy, Brown-Séquard's spinal hemiplegia and hemiparaplegia, cerebral paralysis, sclerosis of the lateral columns of the cord, and lateral amyotrophic sclerosis, was then discussed, after which attention was drawn to chronic anterior spinal paralysis and progressive muscular atrophy, the pathological changes for both being located in the anterior cornua, being inflammatory in the first, and simply degenerative in the second. Friedrich's myotic theory of wasting palsy was criticised, and stress laid upon the analogy of that disease with progressive bulbar paralysis and the latter stages of locomotor ataxy. Dr. Althaus concluded his paper with remarks on the prognosis and treatment of these affections. He objected to the routine treatment of calomel and caustic irritation, and recommended the subcutaneous injection of ergotine in the acute inflammatory stage of infantile paralysis and polio-myelitis of the adult, laying down rules for carrying out this treatment in children of different ages and in adults. As guides he recommended the thermometer and condition of the pupils. After the inflammation had subsided, ergotine was to be discontinued, and iodide of potassium substituted, for inducing absorption of the inflammatory effusions, checking the excessive growths of connective tissue which was liable to follow, and thus allowing those ganglionic cells which had not been destroyed, but only altered, the possibility of regeneration. He also recommended the catalytic effects of the voltaic current at this stage. In the later periods, where there was atrophy and deformity, phosphorus, cod-liver oil alone or in combination, a central and peripheral application of the constant current, together with friction, shampooing, thermal spas, such as Rehral, Wildsbad, &c., and gymnastic exercises were required. He objected to the subcutaneous injection of strychnia, and wound up with some remarks on the treatment of chronic spinal paralysis in the adult, and of progressive muscular atrophy.

Dr. Dowse said that disease of the anterior grey matter of the spinal cord was always associated with the loss of muscular power and muscular atrophy; it was a disease described by Duchenne, and previously by Cruveilhier, under the term spinal myopathy, and more recently by M. Charcot. The disease may be chronic or acute. It may commence in the grey matter of the anterior horns (protopathic spinal amyotrophy), or the cells of the grey substance may be secondarily involved (deuteropathic spinal amyotrophy). The latter condition may result from—(1) spinal pachymeningitis, (2) disseminated sclerosis, (3) intra-spinal tumours, such as the gliomata and sarcomata, (4) hydromyelitis with dilatation of the central canal, (5) sclerosis of posterior radicular fasciculi, (6) sclerosis of the anterior lateral radicular fasciculi, giving rise to that form of muscular atrophy described by M. Charcot as amyotrophic lateral spinal sclerosis.

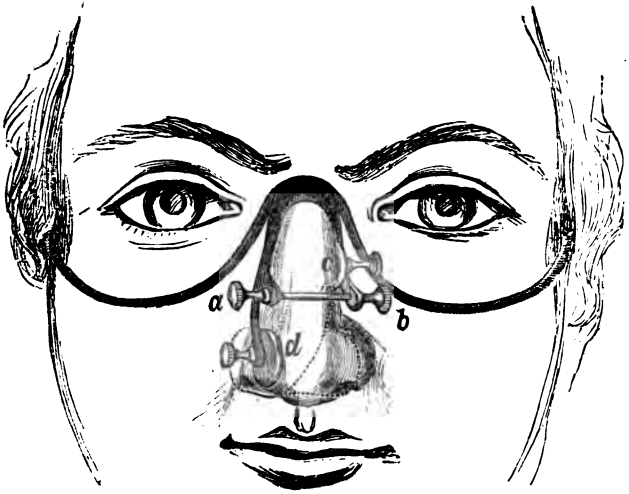
Dr. **Douglas Powell** asked why the faradaic and voltaic currents had such different effects upon paralysed nerves and muscles?

Dr. **Althaus**, in reply, fully concurred in Dr. Dowse's views. In answer to Dr. Powell, he would say that the reason for the difference in the effects of the two currents must be sought in the different duration of the two forms of currents, the former being instantaneous and the latter of considerable duration. If by an artificial arrangement the voltaic current was rendered instantaneous it lost the effect of eliciting a response from the muscles, and a feeble current of long duration had more effect than a powerful one of short duration. Dr. Althaus also explained the different kinds of response observed in health and disease, and said that the increase of voltaic excitability of the muscles continued only for a month or two after the commencement of the disease. He claimed for his researches on freezing portions of the nervous centres the merit of having been the first truly physiological method of investigating the localisation of the cerebral faculties, and deemed it unjust that the results obtained should not be placed side by side with the experiments of Hitzig and Ferrier. He drew attention to the production of myelitis in rabbits by freezing the hind legs with ether spray, and believed that the first effect of the irritant was to cause spasm, and afterwards paralysis of the blood-vessels, by vaso-motor influence. In conclusion, the author expressed himself convinced that the voltaic current, applied in the usual manner to the spine, did really pass through the cord itself, supporting his opinion by reference to physiological experiments and therapeutical results, for which no other explanation could be admitted.

February 18*th,* 1878.

J. C. Thorowgood, M.D., F.R.C.P., Vice-President, in the Chair.

Mr. William Adams exhibited some improved instruments for the treatment of broken nose, a subject he had brought before the Society in 1875. He divided the cases into two classes:—(1) those, where the cartilaginous septum was depressed and bent laterally, so as to plug one nostril, obstruct the breathing, alter the voice, and produce ozæna by the decomposition of retained mucous secretion; (2) those in which the nasal bones were fractured in addition to the lateral bending and partial displacement of the cartilaginous septum. The operation which Mr. Adams had proposed was to straighten the bent septum by large flat-bladed forceps, and, when possible, to raise the lower margin of the fractured nasal bones, afterwards retaining the septum in a straight line with the vomer and perpendicular plate of the ethmoid bone by an ivory clamp, and also retaining the nose in an improved position by a nose truss worn externally. The large flat-bladed forceps originally used by Mr. Adams when he first successfully performed the operation had not been improved upon. The retentive apparatus for the septum and the nose truss applied externally had been materially modified and improved, and various modifications were shown to the Society. The steel screw compressor and the large ivory plugs were now replaced by the ivory clamp with rack-and-pinion movement, first made by Mr. Ernst. The retentive nose truss, consisting of a broad metal forehead band, with two double action rack-and-pinion movement levers, with adjusting plates, had been greatly improved by Mr. Hawksley. The necessity of retentive apparatus in cases of broken nose had been questioned, because of the absence of the causes of displacement by muscular action met with in the extremities and other parts of the body, but if it could be dispensed with in some cases of recent injury Mr. Adams considered that it never could be dispensed with in cases of some months and frequently of several years after the injury, and these were the cases which had generally fallen under Mr. Adams's observation. He especially drew attention to three additional cases under his care, all occurring in young ladies between thirteen and sixteen years of age, who had met with accidents eight or ten years previously by falling down stairs or similar injuries. Increasing deformity of the nose was observed at this period of development, and upon examination one nostril was found to be completely plugged by lateral bending of the cartilaginous septum, the voice and breathing both interfered with, and ozæna generally existed.



In these cases the nose was completely and permanently straightened by the plan of forcibly straightening the septum and afterwards continuing the use of the retentive apparatus, the ivory clamp being used continually for three or four days and nights, and afterwards at night only, whilst the nose truss was worn during the day for several months.

Mr. Spencer Watson then showed an improved instrument for the treatment of distortions of the nose; it is intended for use either as a supplement to operative interference or independently. In some cases of distortion of congenital origin a very slight displacement of the septum and its alæ may be remedied by the use of such an instrument. In others, the displacement is so great that a preliminary fracture and resetting by Mr. Adams's method is required before the instrument can be used effectively. It consists of a strong spectacle frame, attached to the side pieces of which

February 15th, 1 a.m., pulse 120 ; temperature 100·3°; respiration 25. Is able to talk, asked for some milk, which was given to her, and she was sick after it. Tried to get out of bed, was restless through the night. 8 a.m. conscious ; pupils natural. 10 a.m. pulse 100, full ; respiration 18 ; temperature 99·8°.

February 16th, 11 a.m., slept well ; perspires moderately ; has not been sick. Pulse 100, full ; temperature 100·1°This was forty-eight hours after taking the opium, and forty-five hours after the injection of atropine. At this time both poisons were eliminated out of the system.

The effect of atropine was distinctly to raise the pulse and body temperature. The pulse never exceeded 136 at any time. The effect on the pulse lasted for about twenty-four hours. The temperature was raised to 100·4° in six hours, and remained high for twenty-six hours; its highest point being 101·1°. The effect upon the respiration was most striking. The failing respiration was arrested in the most gratifying manner. The effect upon the pupils was to dilate them.

This case illustrates well what Wood says about opium-poisoning in his work on Therapeutics. "In opium-poisoning death occurs chiefly through failure of the respiration. Atropine is the only known drug which has a decidedly stimulating effect upon the respiratory centres. It is evident that in advanced stages of opium-poisoning this property renders atropine an invaluable remedy. In protracted opium narcosis the cardiac and vasa-motor actions of atropine are of service ; but it should never be forgotten that the main influence for good is upon the respiratory centres. The first improvement from atropine is usually increasing frequency of respiration, "and as the breathing becomes less embarrassed the other symptoms ameliorate largely, because of the increased aëration of the blood." Impressed by these remarks the author had previously reasoned out the line he would take if ever a case of opium-poisoning came before him. In his experience he was familiar with the failure of respiration and with the potent influence of atropine in restoring it, and he decided to make a powerful coup at once rather than to give small doses at intervals. The result appeared to justify his conclusions and there was no evidence of unpleasant consequences from the dose of atropine employed.

The contrast between the woman being dragged about and lying quietly in bed, sleeping off her poisons, her respirations being drawn and steady, was very striking. In this case the respiration was much more decidedly affected than the pulse, which never faltered or intermitted. In conclusion the author considered that where atropine failed in cases of opium-poisoning it was probably not given in sufficiently large doses.

Dr. Day (of Stafford) then read a paper on

OBSERVATIONS AND COMMENTS ON CERTAIN CONVULSIVE DISORDERS.

I have been led to select for my subject the consideration of certain convulsive disorders, because I believe there are no cases met with in practice that are, at times, more perplexing in their nature, and certainly none that are, in many instances, more unsatisfactory in their treatment.

In such time as I find at my disposal it will not be, of course, possible for me to take a very wide range in the matter, neither shall I be able to enter very minutely into details such as would, of necessity, form an important part of any paper professing to be exhaustive, but as far as may be practicable it is my purpose to direct your attention, in a general way, to at least two—it may be three—of this class of disorders, viz. "Chorea," "Paralysis agitans," and perhaps "Epilepsy."

To say that the physiology and pathology of the nervous system, is, of all parts of our organisation, the one part most imperfectly understood, is only to say that which has been iterated and reiterated from a very early day down to the present time, and I can only express my unfeigned regret that in such observations and comments as I shall feel called upon to make, I have no idea whatever of being able to offer you a single original conception, indeed, and to speak plainly, my real object will be a very simple one—merely that of endeavouring to trace out in a shadowy way a few of our many shortcomings in this particular field of physic, not truly ignoring the numerous important steps that have been taken with the view of unravelling the multifarious disorders of this marvellously intricate portion of our organisation, but rather pointing, in a clinical manner, to those phenomena we are continually witnessing in such cases, and to the difficulty experienced—*with our present light*—in arriving at a satisfactory conclusion as to which or what cause, of the many causes capable of exciting the display of such phenomena, is the one in operation in any particular case.

Of the three disorders I have mentioned, I prefer commencing with the one first named because there is, perhaps, no disorder of the nervous system more frequently met with, or, as a rule, less seriously thought of, than is the "CHOREA of Childhood," I say *of childhood* because there is, to my mind, a very wide and necessary distinction to be made between cases occurring at this period of life and those that take place at, or about, the age of puberty, or even such as occur at a considerably more advanced age. So great and important is this distinction, at least in my estimation, that, except for the general character of the movements, it might be almost safe to say this form of the affection should scarcely be classed in the same category of disease, or, at any rate, it would be preferable, in my opinion, to place it in a different *order* of this *class* of disease; it certainly does not appear to take its origin from the same starting point, whilst as to treatment, and its effect, it may be confidently asserted that *this* choreic condition is almost always curable, no *un*complicated case remaining unamenable to the means used; on the other hand, we know, from a disagreeable experience, that those cases which arise during the nerve troubles of sexual development, as well as those met with further on, in all of which a different factor is at work, our prognosis requires to be much more guarded, such forms of the ailment proving but too frequently very intractable, yielding but little, if at all, to the treatment employed, and not unfrequently bidding defiance to every effort at cure.

It would be quite beyond the intention of my paper to enter into anything like a critical research as regards the history of the disorders I propose discussing, but, with reference to *chorea*, I may just mention that in a work by "M. Sée,"* and in another by "Roth"† on the same subject, both works being published in 1850, will, or may, be found excellently written historical accounts of the affection. From these it may be learned that although the terms "*chorea*" and "*St. Vitus's dance*" are now used, and have been used for many years, as synonymous expressions, yet the latter affection was only a sort of ecstatic frenzy which prevailed, one may say as an epidemic, in certain German villages about the end of the fourteenth and the beginning of the fifteenth centuries, and this name—*St. Vitus's dance*—seems to have been carelessly, if not ignorantly, given by Sydenham to a condition of a perfectly distinct character, a condition which Bouteïlle proposed to characterise in 1810, under the generic term of "*chorea.*"

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* "De la Chorée," 'Mem. de l'Acad. de Med.,' 1850, t. xv, p. 373.

† Roth, 'Histoire de la Musculation Irrésistible,' Paris, 1850.

It would be superfluous, I am sure, for me to enter into any lengthy description of the well-known symptoms or phenomena displayed during an attack of "*chorea,*" but the definition of these given by the late Dr. Babbington* seems to depict so accurately and so graphically the general character of the movements observed that I venture to quote him, he says: "I should define chorea to be a disease characterised by irregular, uncontrollable contractions of the voluntary muscles, alternating with their atony, and occurring without pain;" further on he explains by saying, "I venture then to express my belief that while in true convulsions the muscles after having been thrown into a spasmodic state do only return to their normal condition, in chorea, on the contrary, a further diminution of nervous influence occurs, so that the muscles become, in all marked cases, entirely passive or inert in the intervals between their irregular and involuntary actions."

For the present, confining my remarks to the "*chorea of childhood,*" I find it necessary to make a few observations as to the particular period of childhood at which the malady is most prone to occur. This form of "*chorea*" has come largely under my notice at the Stafford County Infirmary, and drawing my conclusions from the experience derived from cases seen at that institution, I am disposed to fix the age at which it is most frequently met with as being between *six* and *eleven* years; the generality of cases occurring somewhere midway between these ages. Some authorities,† I know, state that it is an exceedingly rare occurrence before children have changed their first teeth, and it would seem from this, although they do not say so, that they connect the ailment in some way with nerve irritation associated with this dental process, or, speaking more accurately, with a nerve state dependent on the completion of this dental process, but, as far as my observation extends, I have been quite unable to link an attack of chorea with any nerve disturbance in this direction, and let me add that I have seen a case of "*chorea*" in a child who had not cut a single permanent tooth, and only seven of the temporary ones.

Boys are by no means exempt from the disorder, but, unquestionably, the very large majority of cases will be found amongst girls.

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* 'Guy's Hospital Reports,' No. 13, 1814.

† 'Trousseau's Clinical Medicine,' Syd. Soc., vol. i, p. 390.

"*Chorea*" in childhood is found to affect both sides, that is to say, in a very considerable number of cases, indeed, more than two thirds of those I have seen have been so affected, but as a rule, the two sides are not equally affected, and I have remarked that the left side has generally been more troubled than the right side. Complete hemi-chorea is in childhood a comparatively rare occurrence, at least, so far as I have been able to judge, and in those uni-lateral cases which I have seen I have never failed in discovering that, previously to the attack, there has been at some period either rheumatism or scarlet fever, whilst in one case of which I have notes, there had been both rheumatism and scarlet fever, the scarlet fever having preceded the rheumatism.

I would that time allowed of my making something more than a bare reference to the various and prevailing views that have been, and are, entertained as to the etiology of this affection, but undoubtedly you are as familiar with them as I am myself, still I will just remind you that although at one time spinal irritation was assigned as the *only* cause of the complaint, we have had, of late years, theories put forward as to the malady being initiated as the result of some error in connection with the sensori-motor-ganglia at the base of the brain—*corpora striata* and *optic thalami*—hence it has been advanced that an embolic condition of the cerebral arteries is the producing cause, and with this came the explanation of the frequency with which chorea is found to follow upon rheumatism, or even to precede it, whilst, lastly, and at present, we have the opinion of the most recent authority on the subject, "*M. Jaccoud,*" who advocates the instauration of the spinal theory.

"*M. Jaccoud*" bases his support of the spinal theory upon his conviction that co-ordination of muscular movement has *no* single centre, but that the *element* for that function extends through the whole length of the *spinal cord* as far as the "*pons Varolii.*" In the few instances in which he will admit that some injury of the sensori-motor-ganglia may exist, he considers that such a state plays only an indirect part in producing the chorea, and, furthermore, he remarks that when unilateral chorea takes place it is almost universally *left*-sided, whereas embolism of the cerebral arteries occurs by far more frequently on the left side, so that the "chorea" should be on the *right* side, which, except in some few instances, we find *not* to be the case.

Apropos of this view of the spinal origin of the disorder, I may point out that so far back as 1837, Dr. Stiebel published a paper on "Chorea"* (a notice of which may be found in the 'British and Foreign Med. Chir. Review,' No. 4, 1837), in which he, in the strongest possible manner, insists on the spinal origin, and states that out of about one hundred cases of this disorder that had come under his immediate notice, in no single instance was there wanting distinct evidence of irritation of the spinal nerves; and he subsequently proceeds to state that *all* the cases referred to got well, either as the result of treatment, or spontaneously.

Dr. Stiebel fixes the period of life at which he found the disease to prevail most, as being between the seventh and seventeenth year, and, as by far the greater number of his cases took place in patients of the younger age, I think it is not unfair to infer that he had, in nearly every instance, to deal with the "Chorea of Childhood," these cases too, being free from those alterations of organic structure so frequently found to be present in intractable and incurable cases. When alluding to the predisposing causes of chorea, this author says there is, unquestionably, some hereditary predisposition to it, and mentions, in corroboration of his opinion, a circumstance which I can find no mention of by any other author, viz. "its particular frequency amongst the Jews."

To my mind, and I dare say to the minds of many present—the uncertainty—the conflict of existing opinions as to the cause of this disorder arises from the circumstance that different conditions are, at times, capable of leading to the development of the same phenomena, and hence too the reason of first one remedy, and then another, being proposed if not as a specific, at any rate as being specially serviceable in the treatment of the disorder.

I have always been disposed to look upon the uncomplicated "chorea of childhood" as being, for the most part, the result of "*defective nutrition*," an expression you will say of very wide import, since nutrition is not a simple but a most complex process, and the difficulty of deciphering whether the error lies in nutrition as a whole, or is mainly the effect of an interference with some particular part of it, is so great as to be, with our present limited knowledge, insurmountable, yet we are not without good grounds for believing that the force we designate as "nerve force" plays an important, and as I feel convinced the *most* important part, in the production and regulation of nutrition, therefore, we may well direct our attention to the nerve centres, as being the source from which originates this singular malady.

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* 'Wochenschrift für die Gesammte Heilkunde,' No. 1, 1837.

And here I must ask to be pardoned if I make a somewhat lengthy digression to inquire what is the true nature and quality of that force about which we *talk and write so much* and *know so little?* I mean "nerve force," so called. Do we know anything at all about it beyond what we believe we recognise as its visible effects? and, even as to these, have we such certain knowledge as to warrant us in dogmatising as to the precise nature of the producing force? Are we able to pronounce positively as to its source? We choose to characterise it as "*nerve force*" because, experimentally, we consider it has been proved to be connected, in some way, with certain anatomical structures to which we have given the names of nerve cells and nerve fibres, but, are we quite sure that it is *not* a force which exists quite independently of all such structures, and, that this nervous system is only necessary in complex organisms, but especially in that of sentient creatures, for the purposes of an elaborate and special distribution? No recognisable nerve system has ever, as yet, been discovered in plants in which the most complex acts of nutritive life take place. So also in certain protozoa—furthermore—does not the embryo perform all the necessary acts of life, viz. nutrition, formation, growth and multiplication, and this at a time when no trace of a nerve element can be discovered? For my part, whilst speaking with all humility—but I know heretically—I protest that I do *not* believe that this "*force*" is altogether peculiar too, and appropriated only by, our so-called nervous system. I do not believe in this same force being, if I may use a commercial expression, "*manufactured on the premises*," that is to say, in our nerve cells *and nowhere else*, but consider it to be a force inherent in all matter in which *nutrition* is concerned, and that the nerve centres *are the storehouses—not the manufactory*—in which it is allowed to accumulate for subsequent regulated delivery through those distributory channels called nerve fibres.

It has over and over again been asserted and said to be proved, that whilst nerve lesions and irritation (idiopathic and traumatic) affect prejudicially the nutritive integrity of various tissues and parts, yet the complete division of a particular nerve, quite irrespective of the part of the cord with which it may have been most immediately connected, seems to exercise but little if any effect upon the nutrition of the part to which that nerve had previously been distributed; but then arises this question, can this force, which by use and force of habit we think proper to designate as nerve force, find no other course than through those fibres to exercise its influence? Is it not because it really *can* and does do so, that some of our most able experimental physiologists have formed the conception and expressed their belief in the existence of the hitherto undemonstrated "*trophic nerves?*" Again I ask, how it is that other organisms in which no nerve system exists are, so to speak, born, grow, and multiply, if it were not for this very force, a force *made evident by life* and ceasing only at death; what else then is this force other than that true "*vital force*" whose origin, nature, and quality have been the unsolved mystery of all time?

I am quite aware of the tendency existing in the present day, to regard all phenomena, nervous or otherwise, as being the product of purely physical causes, although it is well known that many of the phenomena which occur in everything that has life, cannot be explained either by physics or by chemistry—and—as those who support the physical doctrine of life assert, dogmatically, that all living things are merely machines, and all their actions merely mechanical, it becomes necessary according to one of our most astute biological investigators, Lionel Beale, to accept the following postulates which he has thus truthfully, but yet ironically, formularised and summarised for us.*

"1. The sun forms living beings.

2. The brain, and all organs, have been built by the sun.

3. All the actions of living beings are mechanical.

4. All living things are machines.

5. Living organisms, as well as crystals, are the products of molecular forces.

6. The mind, the intellect, the will, thought and emotion, as well as the body, were once latent in a fiery cloud.

7. The present world and all its inhabitants, past and present, as well as those to come, lay potentially in the matter which was once cosmic dust.

8. The lowest forms of living approximate very closely to non living material.

9. Only matter and material forces, only atoms and atomic

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* 'On Life and on Vital Action in Health and Disease,' by Lionel S. Beale, M.B., F.R.S.

forces have been and are concerned in the formation of all things, living as well as non-living."

And this, gentlemen, is what is, to all intents and purposes taught in the most ancient of our seats of learning, and where caution and Socratic philosophy are, nevertheless, strongly indicated; this, too, is what we as practitioners of medicine, and students of nature, are asked by many medical philosophers to receive and believe as the *true* EXPLANATION of nature's greatest secret ! ! !

But then, some may be bold enough to ask, *can* any such an explanation—nay ought *any* such an explanation—to be received in any such a light ? Is it begot of belief, and belief only, as having complied with the necessities of a stern inductive reasoning ? Is one iota of it capable of proof and so to stand as everlasting truth ? Or is it all to be accepted as the despairing effort of a restless and vivid imagination ? Is there anything, in such evidently gratuitous assumptions, to *convince* you that, in the reproduction of our species for instance, a single spermatozoon (which weighs only the 100th part of a red blood-corpuscle, this latter being only the $\frac{3}{10000}$ part of an inch in diameter) contains within the limits of its almost inconceivable minuteness the physical potentiality, or force, necessary to determine the external features of man ? to push each differentiation of tissue to the extremity of its perfection ? to direct man's height, weight, colour, endow him with reason, thought, feelings, senses, emotions, *volition*, and make him either the embodiment of wisdom or of folly ? I ask once more do the postulates, or dogmas, already mentioned satisfy you that this—and more than this—which medical philosophers (and others advocating the physical doctrine of life force) advance, deserves the assent, the general assent, of scientific men ? Are you prepared to say it is all made so evident, that, to use the words of a writer in the 'Contemporary Review,' "no one even slightly acquainted with scientific methods and results can for a moment brook the idea of any interference with the laws of external nature, the physical nexus between phenomena in their ceaseless flux and reflux is never broken, while the order in which the phenomena appear is governed by the rigour of an adamantine law. This conception of an absolute fixity of physical law is one which the progress of science has made axiomatic."

That is to say, are you willing to acknowledge that those advocating the physical doctrine of life are so indisputably correct in their views, that those who dare to think differently are steeped in ignorance, in short, the biggest fools on earth, or, are you inclined to adopt the satirical lines of "Pope," who, when writing of such philosophers says:

> "Go, wond'rous creature, mount where science guides;
> Go, measure earth, weigh air, and state the tides;
> Instruct the planets in what orbs to run,
> Correct 'Old Time,' and regulate the sun."
>
> * * * *
>
> "Yes, teach eternal wisdom how to rule,
> Then drop into thyself and be —— a fool."

A very subtle speculation this, and the whole matter, at present, so recondite, as to make it safest, it seems to me, to relegate it to a place outside, and beyond the boundary of the study of that science whose aim and object is, past all question, to prevent, to relieve, mayhap to cure our human ailments, and, in this wise, to prolong life, to save it is past all hope, for 'tis nature's fiat that everything *that lives shall die.* Death then *is* natural, as natural as life, not so, however, disease, and 'tis to the prevention, relief, and cure of this, that the study of medicine ever has been, and ever should be directed, but whilst admitting this, and apologising for having, apparently, wandered so far from the original intention of my paper, I am not indisposed to think, and, indeed, believe that at least some of you will join me in thinking that my use of the words "*some error of nutrition*," forms a sufficient excuse, if any excuse be necessary, for diverging for a few minutes to point out "*one of our many shortcomings in this particular field of physic*," a want of knowledge of the origin and nature of that very force whose erratic distribution forms the very essence of the disorders we define, describe, converse about, treat, and try to cure.

When saying, as I did just now, that I was disposed to refer the "Chorea of Childhood" for the most part to defective nutrition, I did not forget that every now and then I have met with a case, as I dare say many if not most of you have done, in which the usual symptoms have taken place *suddenly* in a previously perfectly healthy child, "healthy," I mean, in its fullest sense. A child vigorous in itself, born of vigorous parents, and without a shade of tendency, hereditary or otherwise, to any nervous disorder.

Now, whilst such cases serve to illustrate the suddenness with which an attack of chorea may take place in a child who, immediately before, was in the enjoyment of the most perfect health, by far the largest proportion of cases, occurring in children, are ushered in with symptoms of indisposition of a somewhat special character. For some time before the movements take place the child will most probably be observed to be out of sorts in a general way, the temper is especially prone to become fretful and peevish, the appetite fails, the bowels are constipated, the patient is particularly restless and fidgetty, scarcely ever remaining long in one place, or even in one position, whilst the speech will be noticed as being less distinct than usual, until, after awhile, the characteristic movements gradually develop themselves.

It is in this class of cases, cases which, in my experience, are infinitely the most numerous, that medical treatment seems to be almost universally successful. But then, again, there *are* cases of chorea in childhood which never get well, but last for the remainder of life; it is, however, exactly in such cases as these that, where a post mortem has been made, alteration of ultimate organic structure has, I believe, always been found. Speaking from my own actual observation and knowledge I can call to mind three such cases (one of them I have recorded elsewhere), and in all these the cause was unmistakably spinal; the brain and its membrane being perfectly healthy, but in all these cases there had been rheumatism, and in one, the one I have recorded, there was serious heart mischief.

Looking, as I do, on all cases of chorea that make a perfect recovery as being neither more nor less than instances of disordered nerve function *alone*, and altogether independent of any morbid alteration of organic structure, I think I am justified in saying that the disorder has *no special morbid anatomy;* even in those cases which prove to be incurable, and in which alteration of organic structure exists, it is this *addition* (or these *additions*) to the affection, not the chorea itself, which forms the bar to recovery and which causes the death of the patient when such a termination ensues.

Turning now to the chorea of adolescence or puberty, and including with it, if I may be allowed to do so for the sake of condensation, the chorea which is sometimes met with during pregnancy we have to speak of a condition much more acute, severe, and dangerous in its character, and only too often unmanageable in its treatment. In the chorea which happens during the nerve troubles of sexual development, there are, as might be expected, many shades of severity, but whereas in the simple functional disturbance occurring in childhood, there is always, at times, some slight amount of controllability of the muscular movements, and whilst too, at this age, the movements are sometimes unilateral, in the severe form of chorea I am now alluding to, but most especially in chorea during pregnancy, *all* control of these movements often appears to be lost, the jerkings, and twitchings, being spasmodically violent, *general*, and so incessant that sleep cannot be secured, so that, unless relief be speedily obtained, there is every probability of the patient dying from sheer exhaustion.

I have never met with, but I have read of, chorea taking place in women at the "change of life"—uterine involution—but this may, perhaps, be classed with choreas of sexual life, whilst chorea appearing at a very advanced period of existence is an extremely rare occurrence, indeed it has been questioned whether it ever really does so, but although at one time sceptical on the subject myself, I now consider the evidence in favour of such cases having been witnessed as being irresistible.

As to the cause, or the causes, believed to be in operation for the production of these cases of chorea, it is not necessary for me to do more than make a mere passing reference, because, as if by universal consent, and as being, I suppose, the easiest thing to do, it is admitted, or considered, that the nerve troubles of the generative system are, at the very least, the *exciting cause*, but even here if one were forced into the attempt at a full and accurate description, I should find myself "face to face" with the use of a term I would rather avoid using, I mean "*sympathetic irritation*"—a term which, nevertheless conveys as much as, with our very limited acquaintance with the subject, we are able to convey, and understood in a sort of vague way amongst medical men generally; but especially is it convenient as a term made use of for the purpose of avoiding the perplexing questions which might be put to us by patients, or their friends, disposed to be critically inquisitive.

As my time is getting short, I will not weary you with any account of the many remedies made use of in the treatment of chorea, remedies with which you are all perfectly familiar, but will just say that in the chorea of childhood, I have found arsenic, sulphate of zinc, conium, and the cold shower-bath—particularly the bath—most generally serviceable. M. Jaccoud uses the ether spray to the spine with admirable effect, and I have, myself, had Chapman's ice-bags applied to the same region with very satisfactory results. In 1841 a mode of treatment was adopted at St. Petersburgh [*] which was said to be eminently successful, even in the most obstinate cases. The patient was placed in a bath as hot as he could bear it, kept there for half an hour: and, when thus thrown into the most profuse perspiration, was suddenly plunged into cold wàter.

Is there such a thing as "*a new disease*"? I will say for instance—"a disease of modern life." The question may seem a strange one, if not one that is absolutely ridiculous, but still I have not asked it without having, as I think, a good and sufficient reason for so doing. Is it because a particular and unusual "*modus vivendi*" leads to the development of diseases possessing distinctive features—features not previously witnessed or known;—or is it that, although such diseases have been in existence, and have long since been recognised, yet they have so far failed to attract the attention of medical observers that we can find no positive record of them in times long gone by, or even, indeed, in times but little remote from the present? The question is, unquestionably, one not very easy to answer. As instances of what I mean, I name the following: "*Pelvic Hœmatocele*" was first distinctly pointed out, and described, by Nélaton about twenty-six or twenty-seven years back: before then, no work, although it might be specially devoted to the description of the diseases of women, and the treatment of such diseases, makes any reference whatever to the existence of such an affection, *now*, however, in all such works it is described, commented upon, and the method of its treatment recommended with great distinctness and precision. Again, what was known about that strange disorder "*exophthalmic goitre*" until described by Demours in 1818? one may safely reply that absolutely nothing was known of it until the period mentioned—that is to say, as far as any written description of it is concerned—although it is impossible that a more obvious or a more singular and alarming set of phenomena could have been witnessed.

Turning now to the second of the three disorders I mentioned when commencing this paper, and to which I said I should venture to direct your attention—I mean "*Paralysis agitans*." We here appear to have a malady, which, from his writings, Galen seems to have recognised, for he certainly discriminated and described the two kinds of tremor, the τρεμος, or paralytic shake, and the other which he termed παλμος (palpitation) being a clonic, spasmodic, or convulsive action, yet until, I may say just recently, in none of the classical works of *our time*, can any distinct, clear, and comprehensive history of the complaint be found. Van Swieten,* it is true, in the commentary on the 625th aphorism, enters into a physiological interpretation of the tremor symptom in a manner which possesses considerable interest, but, whether we refer to the "*Lectures of Trousseau*," or the "*Encyclopædia of Reynolds*," in neither of these shall we meet with such an accurate account of the malady as will be able to escape the charge of having confounded two distinctly different nervous affections—viz.: "*Paralysis agitans*" and "*Disseminated Sclerosis*."

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[*] 'Guy's Hospital Reports,' Oct., 1841, No. 13.

The case here seems to be altogether different from that which I endeavoured to point out as having happened with regard to both "*pelvic hæmatocele*" and "*exophthalmic goitre*." No account whatever is to be found of either of these disorders prior to the dates I have given; but with respect to "*paralysis agitans*," it almost seems as though at one time, and that well into the past, it had been well known, and scarcely less well described, had then been forgotten or overlooked, and afterward allowed to remain unnoticed until Dr. Parkinson's essay on "Shaking Palsy," published in 1817, once more directed attention to it. Subsequently it has received some amount of mention by many authors, but it was not until 1861, when MM. Vulpian and Charcot† published an admirable article on the subject, that it began to receive the methodical and critical notice which at last entitles it to a place in every classical account of the disorders of the nervous system.

Although the affection has been, and still is, very commonly spoken of as "*paralysis agitans of the aged*," and although it is quite true that it is most correctly placed amongst diseases of the second period of life, yet it is very far from being correct to style it a "senile disease." It affects more especially those who have passed their fortieth or fiftieth year, but then M. Duchenne (de Boulogne) has recorded the case of a patient who was afflicted with it at the age of twenty, and M. Froupe‡ has published the case of a young girl under the care of Dr. Siredry who was stricken with "*shaking palsy*" at the age of sixteen, and I have in my own practice a patient

* G. V. Van Swieten, 'Commentaria,' t. ii, p. 167, Paris, 1771.

† 'Gazette Hebdomadaire,' 1861.

‡ 'Journal de Médecin et de Chirurgie Pratiques,' p. 389, 1874.

who has suffered from it since infancy, and who is now in his thirty-second year.

As to the most special and striking symptom of "*paralysis agitans*," it consists of a peculiar tremor which is present *at all times* and *under all circumstances* except during sleep. At the outset this tremor is frequently confined to one limb, then by degrees it attacks other parts, and eventually becomes generalised, often—indeed, nearly always—leaving the head untouched. Sooner or later there is a seeming loss of muscular power, but this weakness is rather apparent than real, for, as tested by the dynamometer, there is no real diminution of muscular strength.

Another prominent and most singular symptom (but not present in every instance), which makes its appearance early, but much more frequently occurs at a late period of the complaint, is that the patient loses the capability of preserving his equilibrium. Supposing that he starts to walk, the first step or two will be taken in a slow and laboured manner, and then he appears to be irresistibly propelled forward, going, as the saying is, head first, with a run as though in the attempt to recover the centre of gravity. This is all done *without any sensation of giddiness being felt*, and it is often with extreme difficulty that the patient can stop himself when once fairly started in this "head-foremost" course. This symptom is very pronounced in my patient, who has suffered since infancy; in his case, and in others that I have seen, the running seems to be all done from the ball of the foot, the heel not touching the ground, and the knees being held in a straight and stiff position.

In some instances, instead of this symptom of *propulsion* there is *retropulsion*, and it is said that, in many cases, a slight check or pull of the individual who is being thus propelled will be sufficient to convert propulsion into retropulsion, or, if retropulsion be taking place, then to change this into propulsion. I have tried the proceeding with the patient I have already mentioned, but the result has been a negative one.

A singularly fixed and peculiar attitude of the body, with very immobile features and a stolid expression of the countenance, must also be included amongst the more important symptoms of the disease. The nystagmus, diplopia, and amblyopia, so frequently present in the symptoms of "*disseminated sclerosis*," never exist in an uncomplicated case of "*paralysis agitans*," neither do we find the jaws to be agitated by any convulsive movements, but it is far from uncommonly the case that the tongue, even when retained within the mouth, is subject to a well-marked tremor, and in such cases the tremor is much increased when the tongue is protruded. Speech, as a rule, is but little, if any, affected, sometimes it may be a little slow, and at other times "jerky," and occasionally the pronunciation may seem delayed and laboured, appropriate words are, however, used, and there is no real difficulty in forming the words, but they are, as the saying is, uttered "between the teeth." When the disease is very advanced then there may be, and frequently is, an indistinctness of utterance arising in a great part from tremor of the lower lip, which falls down and allows of a constant, and often of a considerable, escape of saliva.

Amongst the special symptoms to be mentioned is one which has been considered as being very chararteristic; it is muscular rigidity, which is found to exist in a certain stage of the disease. This rigidity affects not only the limbs, but the body itself, and often invades the neck. In the presence of this symptom, crampy pains are complained of, the flexor muscles are generally first and always most affected and as, after a while, this muscular stiffness has a tendency to become permanent, then it is that the patient begins to assume the peculiar fixed attitude I have already spoken of. Any one who has suffered for any considerable length of time from this disease, gradually acquires a particular manner of holding the upper extremities; the elbows are placed somewhat away from the side of the body whilst the forearms are partially flexed, and the hands, also semi-flexed, are rested upon the stomach. The long continued state of muscular rigidity, after a while, affects the hands, as well as other parts—sometimes these, *i.e.*, the hands, assume a sort of deformation or fixed position resembling what is called the "*writing hand*" at other times they are bent and twisted in a manner strongly resembling what is seen in cases of chronic rheumatic arthritis, but it is easy to distinguish it from such a condition, because there is no nodose state of the joints, no actual stiffness or tumefaction, no osseous deposits, no cracking sounds as observed in nodose rheumatic affections.

The lower extremities are liable to be affected with this muscular rigidity to as great an extent, or, indeed, to a greater extent, than the upper extremities, whilst the feet take on as deformed an appearance as that I have described as being prone to occur in the case of the hands. There is one peculiarity as regards this muscular rigidity which is worthy of being remembered and it is this, that in spite of the constrained attitude, in spite of the apparent distortions, there are but few cases in which movements either for locomotion, or other purpose, cannot be executed, the power and capability are there, the difficulty consists in the *effort* required to be made in their execution.

There are two other features in this sad malady which I must not omit mentioning and which, in some of those cases that have come under my own immediate notice, have been especially distressing, the one, is a never ceasing restlessness, and everlasting desire for change of position, accompanied with a wretched feeling of prostration and fatigue:—Sensation, *i.e.*, feeling, is not at all interfered with in these cases, so that, in these incessant seekings for change of position, or posture, if any slight knock or accident happen, the pain is felt with as much acuteness as would be the case with the most sensitive person who is in good health.

The other distressing sensation is that of heat, a sensation which often becomes habitual, so that, whatever the temperature of the season may be, the patient always complains of being hot, will wear nothing but the lightest clothes and will scarcely admit of any covering to the bed. Now this is clearly the *sensation* of heat *only*, for in two cases lately that have been under my observation, and in which this symptom was most annoying, the thermometer in the axilla only registered in one case 98⅖° and in the other 98⅕° (Fahr.); yet in both these cases there was considerable perspiration and the sensation of heat always appeared to be aggravated after an attack of tremor if of more than usual severity. The sensation of heat is said to be more marked over the stomach and back than elsewhere, but in such cases as I have seen, and in which the symptom has been present, the feeling of heat has *not* been referred more to one part than another.

The foregoing objective and subjective phenomena may be said to comprise all that is necessary to constitute the symptomatology of "*Paralysis agitans*" and to distinguish it from that other nervous disease with which it has hitherto been, most probably, too often confounded, I mean "*disseminated sclerosis.*"

There are some few other minor points, and nicer distinctions, which I should have liked to dwell upon had the time permitted, however, I must omit any reference to these that I may next proceed to comment on the mode of invasion, and here we find that, just like it is with "*chorea*, the condition may occur with the most extreme suddenness, or, as is generally the case, there may be threatenings and partial or localised conditions which, from the first, are sometimes permanent but are more frequently transitory, occurring, and perhaps recurring several times, before the symptoms become general, and permanent, such permanency being almost always of the most protracted kind, extending, in many instances over very many years, sometimes as many as thirty, or more. There is a certain mode of invasion which, although exceptional, it is well I should refer to. In this case the tremor is *not* by any means the *first* symptom. Before, sometimes very long before the tremor occurs, neuralgic or rheumatic pains are felt in the limb or limbs that are subsequently affected by the special symptom of the disease, and, with these pains, it is not uncommon to find a feeling of uncommon and unaccountable fatigue. In cases, so commencing, it is not at all rare to find that some accident has occurred to the limb, such as a bruise, a crush or it may be a puncture.

As an instance of the suddenness with which a person may be attacked with "paralysis agitans," I may mention that a young girl who had secreted herself, with others, in a cellar during the last siege of Paris, to be out of the way, as she thought, of the projectiles, was thrown into the most extreme terror by a shell descending into the place of supposed security, then bursting, and destroying three or four persons close to her; she fainted away, and, a few seconds afterwards when recovering, it was observed that her right arm had a trembling motion; at first this was very slight, but very soon it invaded the right lower extremity also, and eventually the whole typical features of the disorder became fully and permanently established.*

As to the causes believed to be capable of giving origin to the disease these, as far as is at present known, may be said to be three in number. First. Violent emotional disturbances, such as fright, sudden communication of unexpected bad news, &c. Second. Prolonged exposure to moist cold, this being, to the mind of some medical men, sufficient to establish its claim to a rheumatic origin. Third. Peripheral irritation of certain nerves as observed in those cases which appear to have had as their starting point some crush, bruise, or puncture.

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* 'Journal de Médecin et de Chirurgie Pratiques,' p. 389, 1874.

It would appear that (so far as our knowledge extends at present) paralysis agitans *pure and simple,* like chorea *pure and simple,* has no "morbid anatomy," that is to say, it is, when uncomplicated, a *purely functional disorder* unaccompanied with any distinguishable alteration of organic structure.

From the circumstance that "paralysis agitans" is a progressive disorder of, usually, very long continuance, and that those affected with it commonly die of some intercurrent disease, the opportunities of making a post-mortem examination of such as have actually succumbed only to the disorder itself, have been very rare indeed, so that, there appears to be no ordinary amount of difficulty in announcing *positively* whether it really has, or has not, a special morbid anatomy, and I am induced to say this (in opposition, apparently, to the opinion I have just previously expressed) from the circumstance that I have been recently told there are some cases (3) recorded by Joffroy Société Biologie, 1871, which go to prove that, at least in these cases, special alterations were found in the spinal cord; for instance, obliteration of the central canal by proliferation of the epithelial elements lining the ependyma, with colouring (pigmentation) of the nerve cells in Clarke's column, but in one case, it is admitted that there was "*also a sclerosed patch*" of the surface of the bulbus rachidicus; well, it may be so, but I think these morbid conditions can scarcely be said to be *special* and *peculiar* to *paralysis agitans,* because, at least some if not all (2) of them (but especially the pigmentation of the nerve cells in Clarke's column) have been seen in several cases in which the spinal cord has been implicated quite apart from the presence of any one prominent symptom pertaining to "*Paralysis agitans.*"

We now arrive at the treatment of this too frequently incurable complaint—I say too frequently, *not always* incurable complaint, because there are well authenticated instances of the disorder having ceased while the patient has been under treatment; but, from the different means used in the several cases, it is scarcely possible to say, with any degree of accuracy, whether the cures were effected by the means made use of, or got well as the result of nature's own beneficient influence—in other words, in consequence of the treatment or in spite of it.

As far as drugs are concerned, the late *Dr. Elliotson* announced a cure under the influence of carbonate of iron—*Brown-Séquard* administered successfully, he thought, the chloride of barium, whilst

Remak and *Dr. Russell Reynolds* claim to have each had a successful case from the use of the continuous galvanic current. Trousseau praises "strychnine" as a remedy, and "ergot of rye," "belladonna," "hyoscyamine," and "bromide of camphor," have each had their advocates, but, sad to say, the general experience of the profession is that these, and all the other numerous remedies that have been extolled and made use of, are of but little if of any avail in the treatment of this pitiable and pitiless affection.

I am very unwilling to leave unnoticed the third disorder on my list, although I feel I have already trespassed too long on your good nature and your patience; I will, however, let my remarks and comments be as brief as may be compatible with the accomplishment of the object I had in view when commencing my paper.

Whatever points of resemblance there may be between *chorea, paralysis agitans*, and *epilepsy*, and undoubtedly there are some, there is, at the very onset, this very wide and important difference, namely, that whilst the first mentioned ("*chorea*") is seldom dangerous and often curable, the two latter are often dangerous and rarely curable. Whilst "*chorea*" is frequently made light of, no one ventures to do otherwise than to think and speak of "*paralysis agitans*," and *epilepsy*, as two of the most sad and serious afflictions that can befall a member of the human family.

I shall not detain you with any remarks on the only too well-known phenomena of an epileptic seizure, but just call to your mind the many different and, in some respects, apparently *opposite* conditions, which may serve as the factors of an attack of "*epilepsy*," viz. the scrofulous constitution, debility, excessive discharges, suppressed discharges, malformation of the head, intemperance, passion, fright, excessive emotional sensations, excessive sexual intercourse, masturbation, plethora of the cerebral vessels, the very opposite condition of the same vessels as seen in hæmorrhage, nerve irritations of almost all kinds, both centric and eccentric, tumours in the brain, parasites in the same position, and the ingestion of certain narco-irritant poisons. These are a goodly number, but undoubtedly there are others that might be added to this list; I have named enough, however, to show that in any given case it may require no ordinary pains to be taken (no slight anxiety to be felt) in the attempt to discover the particular producing cause.

Although we may all of us have good and great reason to remember case after case of this dire disorder in which our every effort at cure has only ended in failure,—cases in which and upon which, we have only been able to look with feelings of absolute despair, yet, it is consolatory to know that there are cases in which, if seen sufficiently early (and the *cause* clearly made out to be *functional disturbance alone*, altogether independent of any alteration of ultimate organic structure), we may be fairly justified in offering a favorable prognosis. At least, this is my opinion, and I feel fortified in it by remembering that it is in entire accord with that expressed by such men as Marshall Hall, Brown Séquard, and Van der Kolk.

Of course, such cases as depend upon alteration of organic structure, the uncontrollable existence of some pernicious secretion, or the persistent practice of some vicious habit, are necessarily hopeless as to their cure, whilst relief, if obtained, can, at the best, be expected to be only evanescent in character.

As regards treatment, I feel fully assured that in recent cases and in cases where the disorder is clearly made out to be purely functional, we have several means afforded us by the resources of our art, which offer a fair prospect of success; when, however, we are unable to unearth the "*origo et fons mali*," or when, being unearthed, it is found to be connected with alteration of organic structure we must confess, with feelings of humiliation, that our blows are unavoidably given at random and in the dark.

Perhaps no remedy has ever enjoyed a more privileged and higher position, in the treatment of epilepsy, than bromide of potassium has done, and that it has done so deservedly, will, I think, meet your universal assent; not that it invariably, and under all circumstances, effects a cure, but that it generally relieves and sometimes removes the disorder.

As in one case of "*chorea*" occurring during pregnancy I made use of bromide of potassium by throwing it up into the bowel with good effect, so in a case of intense and painful priapism with subsequent epileptic seizures, I made use of the same remedy in a similar way, with even a more completely satisfactory result.

Touching, in a hasty manner, upon some of the similtudes to be traced between "*chorea*," "*paralysis agitans*," and "*epilepsy*," I think one is naturally struck with the circumstance that the age of puberty and the accompanying nerve disturbance so frequently found to be present during sexual development, seems both in "*chorea*" and "*epilepsy*" alike provocative of the phenomena, different though they may be, in these two disorders. In "*paralysis agitans*" neither sex nor sexual development appears ever to exercise any influence in the production of the malady.

In very chronic cases, all three diseases are prone to affect the intellectual faculties; this observation, however, applies with especial force to "*chorea*" and "*epilepsy*," whilst many cases of "*paralysis agitans*" run on for very many years without affording a trace of intellectual infirmity.

When we turn to the *causes* capable of leading to the development of these three affections, we are at once reminded that there is at least one common cause which appears capable of leading to an attack of either malady. Emotional excitement may serve to initiate the condition of "*chorea*," of "*paralysis agitans*," or of "*epilepsy*." What are the determining conditions which lead, preferentially, to the occurrence of one disorder rather than the other? an interesting but difficult problem yet to be solved.

An altered condition of the blood, as met with in chlorosis, sometimes leads to a choreic and sometimes to an epileptic seizure, whilst just lately, the fact of "*hemi-chorea*" being followed by an attack of "*epilepsy*," has attracted and received a large amount of attention from experimental observers.

No evidence has, as far as I am aware, ever been produced in favour of the idea that an altered condition of the blood may lead to the disease called "*paralysis agitans*," and yet it is by no means impossible that such a state of the circulating fluid may exist and be the initial cause of the complaint, and this the more particularly as there is no reliable account of any special morbid anatomy having been discovered in connection with the disorder.

There is also this one other remarkable feature common to the three ailments, viz. that each and all of them admit of *almost instantaneous production*, thus establishing conclusively, to my mind, that not one of them is *necessarily* the result of organic alteration of structure; but I would go farther than this, and say that such a circumstance favours the idea that alterations of organic structure are almost always something added to the malady—complications indeed, and frequently very serious complications too, but never forming anything like an *essential* element in the complaint.

How are we to account for the circumstance that such varied and various causes are capable of leading to the display of identically the same phenomena? and again, and on the other hand, how it is that the same cause can call into existence phenomena so obviously different and distinct? Here assuredly is a wide field for the exercise of the great ability possessed by our many experimental investigators, here too it is that they may, perhaps, be able to remove one of those "*shortcomings in that particular field of physic*" which I, when commencing my paper, felt tempted to point out as requiring a greater insight into the true nature of that force whose power we are continually invoking to explain difficulties which, so far, *if we will be candid*, we must admit to be *inexplicable.*

This leads me to speak, in the last place, of certain resemblances exhibited in the treatment proposed for the disorders I have discussed. Bromide of potassium has acquired a high character in the treatment of epilepsy; it is spoken of most favorably as a remedy for chorea, and lately, the bromide of camphor has been vaunted as possessing singular power in the treatment of "*paralysis agitans.*" I look upon the bromine as being the active agent, and regard the metallic base (Potassium) as being the vehicle only by which the bromine is, in some particularly concentrated and nascent form, conveyed into the system, just as with the preparations of mercury, it is *not* the metal which produces special physiological effects, but the *chlorine* or *oxygen* which is combined with the metal in the way I have indicated. Strychnine, again, has been administered, it is said, with some success in all three maladies. Arsenic, too, has not been without some advocates as a remedy in each disease; unquestionably it is of very great value in the treatment of chorea, and I have given it with considerable advantage, I thought, in several cases of epilepsy occurring to young and delicate strumous-looking patients. In "*paralysis agitans*" arsenic has never, in my hands, produced the least apparent good effect.

I have still other observations that I should have liked to make, but that I feel I have already imposed too long on your powers of forbearance, and therefore, Mr. President, and Gentlemen, I shall conclude my paper by thanking you for the kind attention you have vouchsafed to my very discursive comments, and pray permit me to hope that you will now afford me the opportunity of obtaining *from you*, that which I have proved myself so unable to give *to you*—"INFORMATION."

March 4th, 1878.

GEORGE BUCHANAN, M.D., F.R.C.P., President, in the Chair.

The Ballot for the election of Officers and Council for the ensuing year was opened at 7.30 p.m.

The Hon. Secretary read the Report of the Council for the past Session.

The Ballot was closed at 8.30, and Messrs. Edmund Owen, F. R. Heycock, and G. P. Field, were appointed Scrutineers.

The Hon. Secretary announced that the FOTHERGILLIAN GOLD MEDAL had been awarded to Dr. J. MILNER FOTHERGILL for his essay on the "Antagonistic Action of Therapeutic Agents," and the TWO SILVER MEDALS, one to Dr. ALTHAUS for his excellent paper on "The Diseases of the Anterior Cornua of the Spinal Cord," the other to Dr. CLEMENT GODSON, the retiring Secretary, for "Valuable services rendered to the Society during his term of office."

The Treasurer read his Annual Report.

The Trustees of the Fothergillian Fund, per Dr. Cogswell, gave in their Report.

The Hon. Librarian read his Annual Report on the state of the Library.

The several Reports were received and adopted.

The subject of the essay for the Fothergillian Gold Medal, March, 1880, was announced to be "Pathology and Treatment of Dysmenorrhœa."

Professor B. HOWARD, of New York, gave a demonstration of his "Direct method of artificial respiration," showing the advantages it has over the methods of Marshall Hall and Silvester. During the short demonstration given Dr. Howard confined himself to showing how, in comparison with the other methods, the direct method alone in cases of drowning secured drainage and ejection of fluids accumulated in the stomach or thorax. That it secures greater fixed thoracic expansion than Silvester's method, while the compression of the thorax is greater than in either that or the postural method, the whole being accomplished with very much greater ease to the operator.

Dr. Howard laid great stress upon the evils of flexion of the neck, which during the process should be fully extended backwards and downwards. In the demonstration given the compulsory gasp and unavoidable respiratory heaving which immediately attended the performance of the author's method was quite marked.

The President, in thanking the author for his interesting and valuable demonstration, greatly regretted that, in consequence of the annual business of the meeting, there was no time for discussion of the subject.

Mr. Brudenell Carter read a paper on

ARTIFICIAL LIGHT IN RELATION TO THE COMFORT AND WELL-BEING OF THE EYES.

The employment of artificial light, in its relation to the comfort and well-being of the eyes, is a subject which has not received from the profession the amount of consideration which it may fairly claim. In the first volume of the 'Dictionary of Practical Medicine' Dr. Copland writes, at p. 849, under the article "Diseases of the Eye :"

Another and a hitherto unrecognised cause, particularly of inflammation of the internal tunics, is reading, writing, or otherwise exerting the eyes, by the light refracted by ground glass shades placed around the flame of lamps used for illuminating rooms. About fifteen years ago I was affected with slight inflammation of the internal tunics of the eye, but having fully ascertained its cause to have been the use of a table lamp of this description, it soon subsided upon adopting suitable treatment and a different kind of light. I have since had no return of the disease, although I have continued for many years to read or write from eight o'clock in the evening till two or three in the morning. I write, and generally read, at a desk placed sufficiently high to prevent the head from being held low; and use two lamps with single wicks, the flames of which are equal to two large wax candles, and which are raised so high that the eyebrows and eyelids completely shade the eyeballs from the light. These are fed with the finest sperm oil; and, the flames being duly adjusted, they burn eight hours, without any diminution of their light, and without requiring to be once touched. The chief advantages of this light are its softness and clearness, the permanent height at which it remains, and the entire absence of the smallest trouble.

The title page of the volume from which this extract is taken is dated 1858, but that date represents the time of the completion of the work, which, as many who hear me will remember, was issued in small parts at long and uncertain intervals. The date of the appearance of the article from which I quote is not known to me; but the bibliographical references appended to it are carried down only to 1835. On this ground, and since I feel sure that I may place entire confidence in Dr. Copland's assertion that the influence of artificial light in the production of disease had been hitherto unrecognised, I feel also that I am entitled to give him priority to Dr. James Hunter, of Edinburgh, whose treatise on the influence of artificial light in causing impaired vision was published in 1840. Since then, as far as I am aware, nothing has been written upon the question excepting by Professor Arlt, of Vienna, in his book 'Die Pflege der Augen,' which appeared in 1865, and in which the portions relating to artificial light are translated almost literally, and with only a very imperfect acknowledgment, from Dr. Hunter's pages. So much is this the case, that Arlt asserts, in Hunter's very words, that the elementary colours are red, yellow, and blue; although this belief, which was generally accepted when Hunter wrote, had been long superseded at the time when Alt's treatise appeared.

Writing prior to the invention of the ophthalmoscope, and also prior to Dr. Jago's masterly exposition of the true and generally harmless nature of muscæ, Dr. Hunter attributed to the action of artificial light conditions which would now be referred to entirely different causes. His description of the disease produced by artificial light is, indeed, a description of glaucoma; and he regarded muscæ as an important premonitory symptom. I am not myself prepared to go farther than this, that injurious varieties or injurious applications of artificial light must necessarily compel the eyes to work under unfair conditions, subjecting them to excessive stimulation, or to wearying effort, or to excessive convergence or accommodation, or to both; and that these unfair conditions must tend to the production of vascular and nervous derangements, which, in their turn, can hardly fail to be predisposing causes, and sometimes even to be exciting causes, of diseases which are essentially impairments of nutrition, such as cataract, glaucoma, and certain forms of inflammation. Other things being equal, it seems indisputable that eyes which work under unfair conditions will be more prone to suffer than those which have their physiological requirements fairly considered and provided for.

The phrase "artificial light" implies, of course, the existence of natural light, which serves as a standard for the former; and such natural light is furnished to us, not by the direct solar ray, which would be too dazzling, but by what is commonly known as diffuse daylight, or, in other words, by solar rays which have undergone multitudinous reflections from atmospheric particles, from white clouds, from the surface of the earth, and from the various objects around the spectator. It is further essential to the definition that this diffused daylight should neither be transmitted through, nor reflected from, any substance which has a selective affinity for certain portions of it, and which thus reflects or transmits only a coloured ray. The daylight which streams through a stained glass window, or through a coloured blind, is no longer natural, but is in the strictest sense artificial; and, on this ground, there are many houses and apartments the inhabitants of which are under the influence of artificial light so long as they remain within them. It follows that solar light, under certain conditions, will fall within the limits of my paper this evening; and I may therefore properly begin by a few words upon illumination generally, as a preface to what I shall have to say concerning artificial light.

Illumination generally may be hurtful to the eyes either by excess or by deficiency; and both of these are within certain limits relative terms. The amount of light which is required to stimulate the retina to functional activity depends very much upon the amount to which it has become accustomed, and any sudden increase, although it may only be to ordinary daylight, has often been injurious and sometimes even destructive to the sight. On this account, it is possible for the long continued exclusion of daylight to prove very injurious; and this may not only happen when one or both eyes have been for a long time bound up, on account of some diseased condition, but even from the improper use of dark spectacles. Some interesting cases have been recorded, notably that of Dr. George Harley, which show that the amount of light necessary to avoid vision depends rather upon the amount to which the eyes are accustomed than upon the actual quantity. We all know how soon the eyes become accustomed to a comparatively dark room; and Dr. Harley and others, after having been for a time in what would be described in common parlance as complete darkness, have gradually become able to distinguish the objects around them. In the same way, persons imprisoned in dungeons, to which no light has found access but by some single chink or fissure, have after a time been able to see in the darkness, and to distinguish the mice which were attracted thither in search of crumbs. In such cases, the return to daylight has at first been very painful; but, if cautiously and gradually effected, has seldom been productive of permanent injury.

On the other hand, vision has often been enfeebled or destroyed by exposure to a dazzling light, either suddenly on leaving comparative darkness, or by its continued action over a longer period of time. The inhabitants of countries which are covered with snow for long periods, are compelled to protect their eyes from glare by contrivances which vary in different parts of the world, but which have everywhere the same object. Persons who have been much in the tropics, and whose eyes are not protected by being darkly pigmented, are apt to suffer from the affection called night-blindness, in which the stimulus of twilight is insufficient to excite sensation. Every one knows the discomfort which is experienced from a sudden increase of light, as when we come out of a dark room into one which is lighted brilliantly, or when a flash from some reflecting surface is suddenly allowed to fall upon the eye. Such discomfort should be regarded as a warning of the dangerous character of the circumstances which call it forth. There are many who have expiated, by impairment or loss of sight, the indiscretion of looking at the sun ; and those who have watched an eclipse, through a piece of glass insufficiently darkened, have often perceived, for some time afterwards, the appearance of a dark disc or cloud, which assumes a fiery or a violet tint when the lids are closed. This appearance may continue a variable time, hours, days, or even weeks, and it may sometimes leave a permanent dark spot in the middle of the field of vision, a spot which interferes more or less with the definition of minute objects. In other instances, the disturbance of vision will not be limited to a single spot, but will extend, either gradually or immediately, over the whole of the retina. Sometimes, even prompt and well-directed treatment may barely suffice to prevent the occurrence of complete blindness. Professor Arlt has recorded three cases of this description, which he saw immediately after the solar eclipse of 1851. It is easy to conceive that exposure to strong artificial light, as that of fireworks, the lime light, the electric light, the magnesium light, white-hot metal, and so forth, may often prove injurious. Beer has recorded instances in which exposure to bright sunlight on awaking in the morning has produced very troublesome inflammation; and everybody knows how much temporary distress may be occasioned in this manner, either by sleeping in a bed facing the morning sun, with the windows of the room insufficiently protected by curtains, or by these curtains being suddenly drawn aside by a servant.

It follows from the foregoing considerations that the manner of admitting daylight into a room, or the place selected for artificial light, is by no means a matter of indifference. We go into many rooms, scarcely perhaps in London, but certainly in the country and abroad, in which there is too much daylight. It should always be remembered that the position of the eyebrows, and the general structure and arrangement of the eyes and their appendages, are calculated chiefly to protect them from light coming down from above; and that they are comparatively defenceless against that which comes up from below. On this account, very low windows are rather to be avoided, or, if used, they should be fitted with blinds made to draw up as well as down; and the floors of rooms should not be covered with very bright-coloured materials, or with any which possess reflecting surfaces. The blinds, too, by which the admitted light is tempered, should be of a suitable colour; neither white nor white striped with red, but preferably of a blue or grey tint, and of sufficient thickness to be really effectual for the purpose for which they are designed.

The persons whose occupations in life call upon them for regular use of the eyes upon small matters, as in reading, writing, keeping accounts, embroidering, wood-engraving, or any similar pursuits, have not only, like all other persons, to consider the question of light in general, but also the kind of illumination, whether natural or artificial, by which their work is done; and to consider this the more carefully, the finer the work, the closer their application to it, and the shorter their intervals of relaxation. Under defective illumination, all eyes are prone to suffer in the acuteness of their vision and in their power of sustaining effort; and the eyes of young persons suffer also by the curtailment of their visual distance.

The conditions of illumination that are most prejudicial to the eyes which are compelled to work in them, are chiefly these: when the light is too feeble, or insufficient; when it is too strong, so as to be dazzling; when it is unsteady or variable, sometimes strong and sometimes weak; when it is irregularly distributed, as when broken by shadows; of bad quality, as compared with white daylight; and, lastly, when it falls upon the eyes or upon the work in a wrong direction.

Since all the foregoing forms of defect are most liable to be incidental to the use of artificial light, such as is produced by burning candles, lamps, or gas, it follows that those who have no alternative but to work by such artificial light, should be especially careful with regard to its quality, direction, and general management. It has been known, since the time of Newton, that the solar light is a compound of different colours; and the seven bands of the prismatic spectrum have more recently been shown to be composed of three primaries, red, green, and blue. These three, when present in proper proportions, can be combined to form white light; and in the solar light, the blue is almost equal in quantity to the other two, or represents at least six parts out of fourteen in the spectrum. When this proportion is changed, as it usually is in artificial light, the light is no longer pure or white, but is coloured, and the colour of that kind of primary light which is present in excess, is of course that which preponderates. In common candle or lamp light, there is a great deficiency of blue, with a corresponding relative preponderance of red and green; so that the light, as a whole, is more or less yellow or orange. This peculiarity of artificial light is productive of many important consequences. In the first place, coloured surfaces, when seen by artificial light, do not present their natural appearances; and hence, all working with colours, by such artificial light, is either impossible or highly fatiguing, especially with dark colours. The dark colours absorb too much of the light which falls upon them, and returns too little for them to be sufficiently illuminated from artificial sources. Whenever possible, dark colours should be worked upon only by daylight, and the use of artificial light should be reserved for those lighter colours which reflect a larger quantity.

The insufficiency of artificial light depends, not only upon its absolute defect of quantity, but also upon the above-mentioned faultiness of its composition. The blue rays afford by far the sharpest definition of objects seen by them, and the red rays the least; whence, in artificial light, in which red rays are relatively in excess, it is necessary to have a great increase of the light, as a whole, in order to obtain sufficient blue for the purposes of accurate vision. It follows, of course, that the retinæ are over-stimulated, and, in order to avoid the general excess of light, it is a common practice to seek to bring the surface which is looked at closer than is natural to the eyes, and thus to obtain a greater amount of reflection from it. The amount of light which is returned from a given point to fall upon a certain area, as that of the pupil, necessarily varies, other things being equal, inversely as the square of the distance, and hence, from a page at a distance of six inches, the eye receives four times as much light as it would receive if the same page were at a distance of twelve inches. In artificial light, therefore, as in defective daylight, there is a constant tendency to approximate the object of vision; and this approximation, by the action of the internal recti muscles in maintaining the necessary convergence, and also by the action of the ciliary muscles in maintaining increased accommodation, becomes fatiguing, while the consequence is apt to produce an elongation of the eyeball from before backwards, and thus to become a cause of progressive myopia. Deficiency of artificial light is, therefore, one of the worst faults which it can possess, and is that which should be most carefully avoided. Direction of incidence is easily controlled, and excess can always be guarded against; but working with a deficiency of light is always, and under all circumstances, hurtful. It is hurtful even with white or solar light, and it is hurtful in a far greater degree when the light is artificial, and therefore of defective colour. It is sometimes found that those who work continuously by light in which there is a preponderance of the red and green rays, become comparatively insensitive to these colours, so that when they are in white light, or looking at a white surface, they see an appearance of points, lines, or clouds, which are dark blue, or dark reddish blue, and are described as nearly black. There is a familiar child's book in which the principle upon which these appearances depend is applied to the production of aerial apparitions. The book contains pictures in bright colours; and, after looking at one of these pictures steadily for a time, if the eyes are turned towards a white surface, the same pictures are seen in the air, in colours complementary to those in the book. Assuming the picture to be red, the eyes, by looking at it for a time, become insensitive to the red rays. They are then turned towards the white light, in which they are capable of being impressed by the blue and the green rays only. Hence, they see an appearance as of a bluish-green figure, in other respects precisely resembling the red one at which they have been looking. Such experiments are harmless when neither too often repeated nor too long continued, but they show how easily the eyes might be permanently injured by constant employment under artificial conditions of illumination.

In order to improve the colour of artificial illumination, it has been a common practice to surround the lamp or gas flame with a blue chimney, or to wear pale blue spectacles, the glass, in either case, being coloured by an oxide of cobalt. A similar effect may be produced by causing the light to pass through a stratum of blue fluid; but, in either case, it is necessary to remember what the effect really is. The blue medium does not impart any blue colour to the light which passes through it, but only acts by absorbing a portion of the red and green rays, so as to diminish their relative preponderance. The fault of artificial light is not a preponderance of red and green, but a deficiency of blue; and hence the blue medium only corrects the fault by effecting a great diminution of the quantity of light as a whole. The blue rays are deficient to start with, and the blue medium arrests the red and green rays, so that the mass of light is diminished, and, unless this was originally in great excess, the blue medium produces all the evils which are incidental to simply defective illumination. What is wanted for perfect artificial illumination is not a means of arresting red and green rays, but a means of forming blue rays in greater quantity by the process of combustion. Mr. Silber has lately promised me that he will institute experiments with this view, and I have suggested that he should endeavour to find some way of burning a portion of cobalt in his combustible, by impregnating with it the oil or gas by which his burners are supplied. If this could be done, we should no doubt obtain an artificial illumination which would afford all the colours of sunlight mixed in their proper proportion to each other. In the meanwhile, we can only use blue media with advantage when the total quantity of artificial light is so great as to admit of being considerably diminished without serious inconvenience.

An important element in artificial light is due to the heat rays which accompany it. It is well known that all combustion which affords light affords heat also, and the intensity of the heat increases with the activity of the combustion. A gas flame, for example, gives much more heat than a candle flame of the same dimensions. It has been determined by experiment that the blue rays are the least heating, the green the next, and the red the most, in the relative proportions of 56, 58, and 72; and it follows that artificial light, in consequence of the preponderance of red rays in its composition, is warmer than solar light relatively to its illuminating power. Not only is this the case, but it must also be remembered that objects of vision seldom derive their heat directly from the solar ray, which, as already stated, before it reaches them, has usually been reflected again and again from many intermediate objects, from atmospheric particles, from clouds, from the earth, from the furniture of a room, and so forth; all these objects retaining some portion of the heat, until the ultimate illuminating ray, as it reaches the eye, is accompanied by only a small quantity. When, however, artificial light is used, its rays generally fall directly from their source upon the object, and their source is commonly near to the worker, so that both the light and its accompanying heat are usually reflected from the object of vision directly upon and into the eyes. This heat acts especially upon the surface of the eyes and upon the lids, drying and irritating them, and powerfully predisposes to certain inflammatory affections. In certain callings, such as that of an engraver on wood, it is a common practice to interpose between the lamp and the object a globular glass vessel full of water, as shown in the diagram, by which two advantages are secured. In the first place, much of the heat is absorbed by the water; and, in the second place, the globe serves to focus or condense the light upon the point which is being looked at. On this account, a smaller and less heating flame than would otherwise be required may be employed, and the disturbance of vision by scattered illumination is wholly prevented. Another common plan is to place a large sponge, soaked in water, on the table near the worker. By this, no economy of light is obtained; but the evaporation from the sponge serves to keep the surrounding air cool and moist, notwithstanding the heat proceeding from the lamp.

The other chief objections to artificial light are its unsteadiness, its variableness, and the faulty directions from which it often proceeds. All the other forms of artificial light are more or less unsteady, from the absence of any means of maintaining an uniform proportion between the air-supply and the combustible. This unsteadiness is always objectionable; and, in its worst forms, as in attempting to work by the light of a flickering candle, it may be highly distressing. Attempts were formerly made to diminish the effects of this unsteadiness by using two or more candles, so that irregularities of illumination depending upon irregularities of the wicks might be less noticeable, while the total quantity of light would be increased. For this purpose, the candles should be placed as near together as possible, and should not be distributed, or divided to the right and left, since the latter arrangements both diminish the total quantity of light which falls upon the work, and also interfere with its equal distribution. Candles, however, are now so little used, except as auxiliary to other means of lighting, that it is hardly necessary to dwell upon their disadvantages.

A faulty position of the source of artificial light either sends the rays too directly into the eyes, or else affords only an insufficient illumination of the object looked at. An ordinary candle or lamp should have its flame a few inches higher than the eyes, and should be somewhat to the left front of the worker. If placed higher than this, the illumination afforded is commonly insufficient for close application. The central gas or oil chandelier, by which rooms may be conveniently lighted for meals or conversation, is seldom sufficient for any purpose which requires accurate vision ; and I have constantly to warn parents against allowing their children to prepare lessons in the evening in a room which has only this source of light. A flame on the same level as the eyes, or a little below them, sends too much light directly into the pupils, and too much heat upon the surfaces of the eyeballs, and thus tends to produce dazzling, dryness, and irritation. Upon these grounds alone, the practice of reading in bed, otherwise much to be condemned, should generally be prohibited, since the light is almost necessarily placed too low and too much on one side, and the eyes are brought into a strained and unnatural direction. Where the habit cannot be relinquished, it is at least desirable to have a lamp which is capable of being set at any desired height. When the light is too much on one side, it throws one eye into shadow, while the other is perhaps strongly illuminated. The tendency of such unequal illumination is to produce unequal contraction to the pupils, and to render the visual act exceedingly fatiguing.

Of late years great attention has been given to the means of obtaining artificial light, and many improvements have been effected. The electric light furnishes the nearest approach to the solar ray which we possess, since it contains almost precisely the same proportion of blue; but it is too dazzling for ordinary use, and is also attended with too much heat. The very ingenious apparatus of Mr. Van der Weyde, by which he has rendered the electric light available for taking photographic portraits, overcomes some of these objections; and it is quite possible that the electric candles of Mr. Jablowski may in time render this source of illumination adapted for employment in dwelling houses. In the mean time, the best artificial light is that which contains the largest amount of blue; and this character belongs, undoubtedly, to the light furnished by the burners invented by Mr. Silber. It would trespass unduly upon your time if I were to describe these burners; but the general principle on which they are constructed is that of preserving a definite ratio between the air-supply and the fuel supply, so that the process of combustion may be as regular and as perfect as it can be made. The more perfect, chemically speaking, the combustion, the more light will be yielded by a given quantity of fuel, and the more like sunlight will it be. With the assistance of Professor Barff, I have lately commenced a series of experiments upon different forms of artificial light, analysing them by means of a prism, and comparing their spectra with that of the solar ray. When thus tested, they are all very poor in blue; but the light of the Silber burners, besides being very abundant as a whole, gives relatively more blue than any other which I have as yet examined. As one result of this composition, it presents colours more nearly in their natural aspects than any other; and it is found at the Royal Academy, and by artists generally, that it is by far the best light to paint by. It allows the most delicate shades of yellow to be discriminated upon a white ground; and it is less fatiguing to the eyes, as far as my experience goes, than any other. The burners are made to consume either gas or oil; and the lamp before me, by which I have been reading, burns petroleum. Whatever form of light we use, it is manifest that we shall receive less of it by reflection from the surface at which we are looking, than if we look directly at the lamp; and hence, those who work by lamplight should always have the flame covered by a shade of this or of some similar description. The eyes are instinctively raised at every pause in the occupation; and then, if there is no shade, they are raised to encounter an increased degree of illumination. They are stimulated, their pupils are forced into sudden contraction, and they are fatigued and worried during the moments when they might be at rest. With the shade, on the contrary, the eyes are raised to comparative darkness, the pupils are relaxed and dilate, the retina is soothed and rested, and effort is resumed with increased ease and comfort. For some purposes, and when the eyes are irritable, I carry the benefits of the shade as far as possible, by making it of metal, so that it may be perfectly opaque, and by furnishing it with a tongue, like that shown in the diagram, to stop the radiation of light from the chimney.

It is an evil incidental to perfect combustion that it is attended by the development of heat in proportion to its light; and the Silber burners, either for gas or oil, are unquestionably very hot. Their influence in drying the air may be prevented, however, in great measure, by proper ventilation, which necessarily implies a constant fresh supply from outside; or, if this is not sufficient, the wet sponge upon the table will be found a perfectly effectual remedy. The direct radiation of heat to the head and eyes, when engaged in reading or other sedentary work, is best prevented by the interposition of a screen formed of some substance which is impervious, or nearly impervious, to the heat-rays. The most easily accessible screen for this purpose, is formed by a glass cell, containing a saturated aqueous solution of alum, and Mr. Silber, at my suggestion, is making arrangements to supply screens of this sort, affixed to his lamps, so that the heat may be cut off from any side at will. The screen before you is that with which I first experimented, and it is formed, as you may see, of a photographer's dipping cell, supported by a wooden frame. The glass is of all sorts of thicknesses, is full of flaws, and intercepts a good deal of light, although it transmits quite enough for most purposes. A few evenings ago, I lighted my Silber gas burner when the temperature of my room was at 62°; and I placed two thermometers, each with its bulb six inches from the chimney of the burner. One thermometer was exposed to the flame, the other was separated from it by this screen. At the end of an hour, the unscreened thermometer stood at 99,° and the screened one at 73°, so that the screen had intercepted 26 degrees of heat; and it had done this without itself becoming sufficiently warm to radiate to any noticeable degree. I have here a screen made for me by Mr. Ladd, which is of plate glass, and will scarcely obstruct the light at all; but I have worked now for some time, in great comfort, behind the shelter of the experimental one. The solution of alum may be coloured blue, if desired, by the addition of a few drops of a solution of the ammonio-sulphate of copper; but it must be remembered, as I have said already, that in this way, we only take away red and green, and do not add blue. We must, therefore, have plenty of light to begin with before we try to improve it by such an expedient. The same thing may be done by the interposition of a slip of blue glass, such as I often use in order to soften the light of my ophthalmoscope lamp, and to render it less dazzling to patients.

The best illumination, therefore, for all practical purposes of close work, seems to me to be that of a Silber burner, it matters not whether for gas or oil, placed to the left front of the worker, arranged so as to be a little above the level of the eyes, fitted with a shade to cut off light from above, and with an alum screen, when the heat is objectionable. To this arrangement a wet sponge may be added for those whose eyes are irritable, or whose eyelids are prone to be inflamed.

Finally, with regard to all artificial illumination, I would observe that those who can divide their time as they please should endeavour to get through work which is trying to the eyes in the daytime, and should reserve for evening that which demands a less degree of visual effort. Reading requires a greater degree of visual effort than copying, and copying a greater degree than simple writing. Furthermore, in the long continued use of artificial light, an occasional change or alternation of occupations is exceedingly desirable. After two or three hours of reading, for example, the eyes may be much rested by writing for half an hour; and it is still better to break the work, of whatever kind, by short intervals of complete repose, during which the worker may walk about the room, and, if the eyes feel distressed, may bathe them with a little cool but not too cold water. It will sometimes be very grateful if to this water a little toilet vinegar is added.

I fear, sir, it may be thought by some who hear me, that I have occupied much time by trivial details about matters of very small importance. I trust that this is not the case. I have already said that I acquit artificial light of the grievous charges which were brought against it by Dr. Hunter, but I am none the less sure that its due regulation and management should occupy a prominent place in what I may call the hygiene of vision. We know very little about the predisposing causes of many of the causes of blindness, especially cataract and glaucoma; but I think there can be little doubt that any tendency to these affections, and probably to many others, may be either retarded in its development, or perhaps kept wholly in abeyance, by taking reasonable precautions to render conditions of vision which, when all is said, are essentially unnatural, as little unnatural as may be possible. Even if we do not keep away disease, we may certainly increase comfort, and this, when it applies to the habits of daily life, is a consideration which ought not to be despised.

Dr. HEYWOOD SMITH asked whether a green shade would not be considered preferable to a blue one?

Dr. LEARED asked was not a Sugg's burner preferable to a Silber.

Dr. GIBBON asked what limitation of light should be given to a worker?

Dr. ALFRED CARPENTER asked whether, working in a bright light or a moderate one was the better—red, green and blue; or red, yellow and blue, which are the primary colours?

Mr. CARTER, in reply to the several speakers, said that he thought it impossible to say, generally, what amount of light should be employed, as this was a question upon which every worker must be a law to himself. The principle was that there should be light enough to allow the objects of vision to be clearly seen without bringing them nearer than twelve or fifteen inches from the eyes. About the relative merits of gas and oil it was difficult to speak, as gas varied much in quality in different places; but he thought more depended on the burner than upon the fuel. He had not tested Sugg's burners with the prism, but he had seen them tested for illuminating power at one of the great metropolitan gas-works, and they were inferior to the Silber burners, although a great improvement upon all which had preceded them. On that occasion, for a consumption of five cubic feet of gas per hour, the Sugg burner gave about seventeen candle light, and the Silber about twenty-two. But he believed the amount of light given by either was to some extent dependent on the height of the chimney, and possibly the Sugg burner might have done better with a different chimney. With regard to the primary colours of the spectrum it had been shown by Professor Clerk Maxwell that they were really red, green and blue, and not red, yellow and blue, as had once been supposed.

March 8*th,* 1878.

George Buchanan, M.D., F.R.C.P., President in the Chair.

The Dinner of the 105th Anniversary of the Society was held at the Grosvenor Gallery.

March 11*th,* 1878.

Erasmus Wilson, F.R.C.S., F.R.S., in the Chair.

The President delivered the following address:

Gentlemen,—Before I proceed to occupy the Chair to which you have so kindly and generously elected me, permit me to thank you for the honour and distinction which you have been pleased to confer upon me. I feel the honour the more from its having been so entirely spontaneous on your part, and I must admit, to a considerable extent, undeserved. Had I been a stirring omnipresent actor in the business of your meetings, there would have been an apparent reason for your selection, whereas in reality I have been almost a constant absentee; perhaps you have generously considered what is really the fact, that my absence has been occasioned by my professional duty, and in some degree by feebleness of health induced by continued labour; and in this sense I accept the honour which has been bestowed upon me all the more cheerfully as the reward of the earnest labourer. I trust that in the session which is now opening that I shall be surrounded by those who are appreciators of work, workers themselves, and devoting their energies to the intercommunication of information and to the improvement of our common stock of knowledge. I shall indeed be gratified should my year of office be distinguished by the emulative exertions of the whole of the members, and that it should at least be as brilliant as that of my predecessors. I can very honestly promise that no exertions on my part shall be wanting. Men may grow old in their bones and cartilages, as the anatomists are good enough to assure us, but it nevertheless frequently happens that the brain grows young or at least more robust and mature, and acquires a more eager desire for food—intellectual food—and more vigorous of assimilating information. Work certainly begets the desire for work, a yearning after further and more perfect knowledge, and of this truth we have an apt example in the present Society. I have therefore to exhort the senior Fellows to bring before us their practical knowledge and experience, and the juniors to set forth their difficulties and obstacles, and receive the instruction which the elders are always ready to communicate.

The PRESIDENT showed

A CASE OF MOLLUSCUM SIMPLEX,

with photographs of the patient.

James G—, æt. 39, has been afflicted with molluscum simplex twice. At the age of eleven it began by a few scattered pimples, but now may be said to occupy the integument of nearly the whole of the body, being mostly developed on the trunk, the outside of the arms, the forehead and scalp, particularly around its occipital border. The portion of the body least invaded is the integument encircling the pudendum and the upper and inner portions of the thighs; the affection, however, is not limited to the external integument, but also exists within the mouth and notably on the palate. On a superficial view the body seems thickly studded with small tumours of the size of marbles and peas, while here and there may be seen pedunculated and pendulous pouches, and small tumours umbilicated by the pore of a follicle loaded with sebaceous secretion; some of the tubercles and particularly those of the smallest size have a pinkish colour, but the larger ones have the ordinary complexion of the skin. Here and there a small pink tubercle is developed on the surface of one of the larger kind. The smaller and smallest tubercles, and particularly those with a pinkish hue, are remarkable for their softness as tested by compression between the fingers; while the larger, less prominent, and deeper seated tubercles are denser to the touch. This difference results obviously from the seat of development of the tubercle either in the softer and more vascular connective tissue of the papillary layer of the skin; or in the denser and less vascular fibrous tissue of the corium. The whole of the tubercles, great and small, are smooth and shining. Several examples of this curious affection are known to us; but a more complete case could hardly be expected, representing as it does the growth of twenty-eight years.

The parents of the patient are still alive at the respective ages of seventy-two and seventy-three, and have always been healthy; and he himself is one of eleven children all enjoying excellent health. His father was a zinc worker, and he was brought up to that business; but from a sense of weakness and feebleness he has not been able to pursue any employment for several years past.

Mr. Lund (of Manchester) then brought forward a case of

REMOVAL OF BOTH ASTRAGALI, FOR SEVERE DOUBLE TALIPES.

H. W—, æt. 7, was admitted into the Manchester Infirmary for double talipes equino-varus on the 22nd January, 1872. It was stated that he was born with the deformity, and at the age of six months he was under the care of an orthopædic surgeon in London, by whom the tendons were divided. He subsequently had an apparatus for the feet, and afterwards boots with irons attached. When the patient first came under Mr. Lund's care, whatever improvement might have resulted from the division was lost; he was placed under chloroform and several attempts were made, though in vain, to break down the adhesion, the great obstacle being the partial dislocation of the astragalus.

After consultation with his colleagues he determined to remove the astragalus from each foot, which was accordingly done on the 17th May last. An incision about one and a half inches in length was made over the head of the astragalus, and when the bone was fully exposed an attempt was made to raise it by means of a gouge; in doing which a thin piece of the cup of the scaphoid and a slice of the inner side of the malleolus were detached. To complete the dislodgement a small strong curved hook with a cutting edge on its concavity was found very useful; this hook was used as a lever and by passing it between the bones, the interosseous band was cut through, and when this was done the astragalus was easily removed.

Guided by his experience on the left foot Mr. Lund, when operating on the right, used only the cutting hook, so that in this foot the neighbouring bones were not injured. The operation was done according to the principles of antiseptic surgery, and the wounds healed by the thirty-eighth day. The subsequent treatment consisted in the use of elastic bands to abduct the foot and keep the external border raised. At the end of September he was supplied with a pair of Dr. Sayre's club-foot shoes. The boy was then shown to the Fellows and it was apparent that there was considerable flexing movement at the ankle, and he was able to walk with comparative ease.

Mr. Lund remarked in conclusion that his operation was intended for cases of unmanageable talipes in which tenotomy and instrumentation had been tried and had falled.

Mr. **William Adams** looked upon the case as one of great interest, the only defect was a little excess in the arch of the foot, and slight contraction of the Achilles tendon; he recommended either cutting or extension of this tendon.

Mr. **Davy** then related a series of cases in which subdivision of the tarsal arch had been practised for

CONFIRMED AND INTRACTABLE TALIPES.

He hoped that the Fellows might not think it inopportune that he should relate his experience on subdivision of the tarsal arch in connection with Mr. Lund's case of removal of both astragali. Mr. Davy stated that his practice had been based on many experiments, the natural outcome of the operation performed by the late Mr. Solly in 1854; he had first repeated the removal of the cuboid bone in 1874, and had now the records of seven cases—three in which the cuboid or both cuboids had been removed; three in which a wedge-shaped piece of the tarsal arch had been taken away for talipes equino-varus; one in which a wedge had been excised for persistent talipes equinus.

1. Boy, æt. 15, 27th January, 1874. Left cuboid removed; recovery in seven weeks. March 17th, 1874.—Right cuboid removed; recovery in nine weeks.

2. Boy, æt. 14, January 15th, 1875. Right cuboid removed; recovery in ten weeks. The cast of the deformity was exhibited as well as the boy himself; result imperfect.

3. Boy, æt. 9, January 26th, 1875. Both cuboids cut out at one sitting; recovery in three months.

4. Boy, æt. 6, March 28th, 1876. Removal of wedge of tarsal arch; recovery in ten weeks.

5. Boy, æt. 12. Right tarsal arch divided November 14th, 1876;

recovery in six weeks. January 16th, 1877.—Left tarsal arch divided; recovery in six weeks. The cast was shown and the boy also; he walked six miles the day before (March 10th) without any kind of support.

6. Girl, æt. 1½, March 5th, 1878. Removal of portion of tarsal arch; progressing favorably in hospital.

7. Talipes equinus, November 20th, 1877. Removal of wedge-shaped block of tarsus, December 5th, 1877. Death from septicæmia. The outline of the deformity post-mortem cast was shown. Mr. Davy stated that his method of operating had been fully described in the 'British Medical Journal' of December 15th, 1877, and insisted that the operation should be practised on inveterate cases which were not amenable to milder treatment. Mr. J. Davies Colley, Mr. T. Smith, and Prof. John Wood had each of them operated most successfully in such cases.

Mr. **Maunder** thought that in certain cases an operation involving the removal of bone was necessary, when tenotomy and instrumentation had failed. Mr. Davy's operation necessitates the division of important structures in the arch of the foot; he therefore preferred Mr. Lund's.

Mr. **Davies Colley** removed the cuboid and adjacent bones in a V-shaped piece; he operated on both feet at the same time. In ten weeks the boy was able to walk and eventually he was able to run. In Mr. Lund's case there must of necessity have been a great gap to be filled up by fibrous tissue, and this would require a considerable time.

Mr. **Owen** did not consider the result of Mr. Davy's operation very happy. In the case of the child sixteen months old the operation was hardly necessary. He suggested that Syme's operation might have been useful in some of the other cases. Had Mr Lund tried extension under chloroform before operating?

Mr. **Thomas Bryant** said that there were a certain number of cases in which tenotomy having failed, some other operation was necessary. He thought Mr. Davies Colley's case was unsurpassed; he was rather disappointed with Mr. Davy's case No. 2, in which the cuboid was removed. When the varus is worse than the equinus, then it would be advisable to remove a wedge-shaped piece after the manner of Mr. Davies Colley, but when the equinus predominates Mr. Lund's operation in all probability was preferable.

Mr. **Royes Bell** mentioned a case of double equino-varus which

Mr. John Wood treated in the ordinary way by division of tendons; one foot did well, but in the other he had to remove a wedge-shaped piece of bone.

The **President** thought these cases well illustrated the progress of the art of surgery. We are not contented with what was formerly deemed success.

Mr. **Lund** stated in reply that he had endeavoured to get movement under chloroform before proceeding to operate, but had failed in doing so.

Mr. **Davy** agreed with Mr. Bryant that his case No. 2 was not as great a success as he could have wished.

March 18*th*, 1878.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Mr. **Allingham** showed a pathological specimen, consisting of about four inches of the lower end of the rectum, which he had removed for epithelioma. In the operation he tries to save the external sphincter, so that his patients may have good power of retention of both fæces and flatus. The operation may prolong the patient's life in a manner preferable to that of colotomy, with which, however, it bears no comparison, as it is undertaken under entirely different circumstances.*

Mr. **William Adams** exhibited to the Society an improved form of Scarpa's Shoe for the treatment of talipes equino-varus, and cases of relapsed varus, by the use of which many of these cases may be cured more perfectly and in a shorter time than by the instruments generally in use.

Mr. Adams considered that the instrument usually employed, the so-called Scarpa's shoe, was admirably adapted to the treatment of talipes equinus, in which deformity the foot moved, as a whole, from a single centre of motion, viz. the ankle-joint, but a great error was committed when this apparatus was used for the treatment of talipes equino-varus, or for varus.

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* This case is reported *in extenso* in 'Diseases of Rectum,' 3rd edit., p. 382, case 7.

In all the more complex distortions, such as equino-varus, varus. and severe valgus, the foot no longer moves as a whole from one common centre of motion, but it moves in two portions from two distinct centres of motion, viz. the ankle-joint and the transverse tarsal, or, as it is sometimes called, the medio-tarsal joint, in front of the astragalus and os calcis. It is of the utmost importance to consider the direction in which the anterior and the posterior portions of the foot move from these two great centres.

At the ankle-joint we have only the simple movement of flexion and extension, but at the transverse tarsal joint, which partakes more of the ball-and-socket character, the anterior portion of the foot is capable of being moved in several directions. In equino-varus, and in varus, the anterior portion of the foot is inverted, rotated inwards, and flexed, so that tho foot is bent upon itself in the direction of its length; and in severe cases of talipes valgus the anterior portion of the foot is rotated outwards.

It is obvious, therefore, that the instruments used to correct these distortions should be subdivided, like the foot, into two distinct centres of motion, and that each portion should be capable of moving in the same direction as the portion of the foot to which it is adapted. The mechanical centres of motion must also be made to correspond, as nearly as possible, to the anatomical centres of motion.

It is with these fixed ideas that Mr. Adams gradually improved the instrument which we still call the Scarpa's shoe, and the latest improvements are shown in the instrument exhibited to the Society; it has been made, under his direction, by Mr. Ernst, of Charlotte Street, Fitzroy Square.

In this improved Scarpa's shoe the sole-plate is divided into two portions by a joint corresponding to the transverse tarsal joint, and the anterior portion can be moved in various directions by three cog-wheels, or rack-and-pinion movement in the sole plate; the movement of inversion and eversion is regulated at one, that of flexion and extension at another, and rotation at the third, so that the anterior portion of the sole-plate can be moved in any of these directions, the mechanical thus corresponding to the anatomical centres of motion in the production of the deformity.

Mr. BALMANNO SQUIRE read notes of

TWO CASES OF PORT-WINE MARK TREATED WITH A VIEW TO OBLITERATING THE MARK WITHOUT LEAVING A SCAR.

The one case was that of a man, æt. 30, the other that of a woman, æt. 55. In both cases the port-wine mark was confined to its commonest situation, namely, the right half of the face, occupying in each case the greater part of the front of the right half of the face. In neither of these cases did the patient continue under treatment sufficiently long to allow of the obliteration of the whole of the port-wine mark, but in each case a considerable portion of the mark was eventually completely obliterated, and that without the production of any scar whatever. The means adopted was, in both cases, the same, that is to say, the scarification of the flat nævus by means of parallel incisions effected with a frozen scalpel, the skin also being frozen by means of the ether spray. The parallel incisions, carried as deep as the entire thickness of the skin proper, were spaced as close together as the sixteenth of an inch. As soon as these had (within three or four days) completely healed, a second set of parallel incisions were made, the direction of the second set of incisions being made obliquely to the direction of the first set, and so on with a series of operations. The direction of the parallel incisions was on each occasion successively somewhat veered. In this manner, after about ten sets had been made the port-wine mark had become permanently and considerably fainter, and yet without any trace remaining of the numerous incisions that had been made into it. Going on in this way the portions of the mark operated on were eventually completely obliterated without scar or other trace of interference being left.

Mr. B. Squire exhibited water-colour drawings of the two cases thus operated on, and also pen-and-ink sketches of an instrument he had devised (made for him by Messrs. Weiss) for executing a series of incisions at one stroke. This instrument was like an ordinary scalpel, only that it had sixteen parallel blades instead of one. These blades were so thin and placed together so closely that eighteen of them measured only half an inch across. This instrument he had used with considerable success, both the instrument and the skin being frozen immediately before operating.

Mr. Squire also described an apparatus consisting of a number of parallel needles fixed in a plaster-of-Paris handle, so that the handle contained thirty-six needle-points in the half inch square. If these were heated red hot and thrust into the skin they produced, as he had found, complete sloughing of the entire area of skin operated on. But if they were heated to only black heat, and their introduction into the skin was effected only momentarily, then they produced only a stippling of minute punctiform scars. However, his experience was, on the whole, vastly in favour of the multiple, parallel, linear scarifications made with chilled steel as at first described, rather than of the multiple punctiform operation with black-hot steel.

Mr. Malcolm Morris had tried some experiments on the dead body with a cataract needle, but was unable to make parallel lines; he therefore applied to Mr. Hawksley, who had constructed a little intrument consisting of a series of small lancets arranged parallel to each other; these could be protruded to the required extent by turning a screw; he did not think that the perchloride of iron was likely to prove a success.

Mr. Squire said that he did not now advocate the employment of the perchloride of iron. The operation was not entirely new, as it had been employed by Prof. Hebra. He had also tried linear scarification in lupus erythematosus.

Mr. Wordsworth showed a curved needle for treating cases of port-wine mark; the needle should be heated sufficiently to cause adhesive inflammation without setting up suppuration.

Mr. Davy had a huge port-wine mark, extending from the scalp over the face, under treatment; he used Paquelin's cautery; the stain was now of a delicate pink colour instead of its former distinct purple hue. He had left the stain over the scalp without treatment so that the Fellows might have an opportunity of comparing the state of affairs before and after treatment. A curious phenomenon about this patient was that she had menstruated for sixteen years through the stain. Had he not succeeded in his operation he had determined to tattoo her white with the silicate of magnesia.

Dr. Sullivan read a paper on the

ACTION OF MALARIA ON THE HUMAN ORGANISM.*

He advocates the theory that to nerve paralysis through the action of this poison must be attributed not alone the phenomena manifested during a paroxysm, but also the sequelæ of the intermittent fever. He availed himself of the occasion to expound the views of Professor Barcelli, of the University of Rome, "On the Influence of Malaria on the Spleen." He explained by means of a diagram, copied from one of Barcelli's, the special venous circulation between the spleen, stomach, pancreas, and liver, together with the peculiar function of the spleen destined to supply the glands of the stomach with the materials necessary for their secretion. He therefore concludes that whatever tends, like the poison of malaria, to impair the function of the texture of the spleen (an organ which, as a part of the lymphatic apparatus, acts so important a part in the formation of the blood and in the process of nutrition) must affect greatly the function of digestion.

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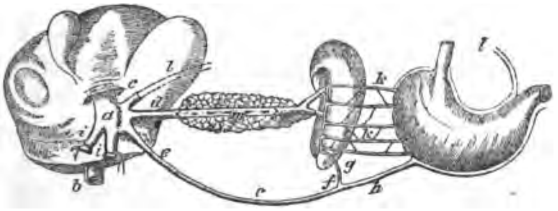
* This paper has been published *in extenso*. See 'The Medical Times and Gazette,' May 11th, 1878.



March 25th, 1878.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Dr. **Cobbold** read a paper in three parts on

FILARIA SANGUINIS HOMINIS, CLINICALLY CONSIDERED IN REFERENCE TO ELEPHANTIASIS, CHYLURIA, AND ALLIED DISEASES.

[The first part was by himself, and the remaining two by Dr. Manson, Physician to the Missionary Hospital at Amoy.*]

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* The sections of this paper contributed by Dr. Manson have been published in the 'Customs Gazette,' and have been reprinted in the 'Medical Times and Gazette' for 1877 and 1878.

Whilst my correspondent, Dr. Manson, is responsible for the purely professional facts that I have the honour to communicate this evening, it has been thought advisable to prefix his observations by a few remarks having almost exclusive reference to the parasite which is more or less directly concerned in the production of chyluria, elephantiasis, craw-craw, lymph-scrotum, Bancroft's helminthoma, and other affections.

I wish to say at once that, if the *Filaria sanguinis hominis*, Wucherer's filaria, or the *Filaria Bancrofti* (as I prefer to call it) be really the cause of these various diseases, or at least of certain forms of them, then it follows that the discovery of this entozoon is relatively of far higher importance than the somewhat similar discovery of *Trichina*. For myself, entertaining no doubt on this point, I do not hesitate to characterise this accession of knowledge as the crowning discovery of helminthology in relation to scientific medicine.

On the 7th of the present month I communicated to the Linnean Society a memoir in which I sought to give an exhaustive *résumé* of the history of the discovery of *Filaria Bancrofti*. I there passed successively in review the earlier finds of Wucherer, Salisbury, Lewis, and myself, and also the later investigations, finds, and verifications, as the case might be, of Lewis, Sonsino, Bancroft and myself, Roberts, Manson, Crevaux and Corre, Da Silva Lima, O'Neill, Foncervines, Silva Araujo, and Felicio dos Santos. For many of the facts I stood indebted to the writings of Drs. Victorino, Pareira and Almeida Conto, as made known by Da Silva Lima's first able memoir. This appeared in the 'Gazeta Medica da Bahia' for September, 1877. Fortunately, the distinguished *savant*, M. Le Roy de Mericourt, supplied a French version of S. Lima's paper, appending some remarks of his own, in which he was good enough to supply an abstract of the description and particulars I had published in the 'Lancet' respecting the *Filaria Bancrofti*.

In any discovery, or set of discoveries, calculated to confer untold benefits on mankind, it need not be a matter of surprise that earnest workers should display some sensitiveness as to the prominence awarded to their individual labours. Lest, however, injustice should be done to those who, by reason of the accident of their position, could not possibly make the original finds, I may remark that, as regards practical issues, a far larger advantage flows from the correct appreciation and interpretation of the facts observed than from the more fortunate incident of the discovery itself. The *Trichina* controversy, in which it was my lot to take an active part, abundantly proved the truth of this postulate, and, therefore, now as then, when it is asked who discovered the parasite, our reply must be framed according as to whether the inquirer refers distinctively to the embryonic entozoon, to the higher larval form, or to the sexually-mature worm; or, again, as to whether he refers to the diseases superinduced, to the pathological conditions, or to the not less important diagnostic and sanitary value of the facts recorded.

I have felt it incumbent upon me to make these remarks, inasmuch as within the last few weeks new claimants have arisen to share, if not to dispute the honours of discovery. I shall not now attempt to discuss the question of priority at any length, but I am constrained to remark, in passing, that whilst, in strictly chronological order, Wucherer's claims occupy the first place, we are equally bound—in view of the large results accruing to their separate discoveries—to single out and bracket together the names of Lewis, Bancroft, and Manson. Let it also be borne in mind that, whilst these three observers have supplied the chief links in the chain of evidence, the contributions of other labourers have played no inconspicuous, though it may be a subsidiary, part. In this connection, moreover, it will not be forgotten that Sir Joseph Fayrer suggested the parasitic origin of elephantoid disease before the filariæ were actually found to be associated with it. This inevitably reminds me of Hilton's similar and original prediction in the case of the muscle-specks or gritty particles, which afterwards turned out to be capsuled Trichinæ. In the same category of correct forethought must be placed Bancroft's conjecture that mosquitoes sucked up human filariæ—a supposition which was soon after verified in the fact by Manson.

As regards the order of discovery of the adult worm, the precise dates stand as follows:—Dr. Bancroft, December 21st, 1876; Dr. Lewis, August 7th, 1877; Dr. Silva Araujo, October 16th, 1877; Dr. F. dos Santos, November 12th, 1877. I give these dates unhesitatingly, without, however, in any way wishing to prejudice the question which has already been raised in respect of the identity of the worms found in each case. Dr. dos Santos' find was made in conjunction with Dr. I. de Moura, in a case of lymphatic abscess of the arm.

Clinically viewed the case by Dr. Araujo must be regarded as unique. Not only were adult and embryonic filariæ found in the same patient, but, what is far more surprising and interesting, the unfortunate victim displayed in his own person several of the disorders hitherto found apart. Moreover, by one or two of the diseases he was more than once attacked. Thus, he had numerous attacks of erysipelas, which began twelve years previously. These at length increased in virulence. He experienced a first attack of chyluria three years ago; also attacks of craw-craw, commencing a year ago, the latter being attributed to bathing in a particular lagoon. He had a second attack of chyluria six months back, at which time, also, lymph-scrotum appeared, and also scrotal elephantiasis. Dr. Bourel-Roncière pronounces this case to be unique, and attributes nearly all the disorders to the presence of Wücherer's embryonic filariæ. Electricity was employed in the treatment, and it is said with excellent results.

In the very elaborate analysis and commentary of Dr. Da Silva-Lima's second memoir (in which, also, the writer gives full details of Dr. Araujo's remarkable case) Dr. Bourel-Roncière warmly claims for Wucherer the supreme honour in all these discoveries, and, as if to magnify Wucherer's achievements, he does not hesitate to roll together into one a variety of affections hitherto regarded as distinct. They constitute, in short, mere phases of one and the same disorder, which Dr. Roncière calls "Wucherer's helminthiasis." With certain limitations, clearly not due to vermination, I see no objection to this view of their common origin. Manson, indeed, has independently arrived at the same conclusion; yet, as regards the, perhaps, undue glorification of Wucherer's claims by Bourel-Roncière, I will only add—as an honoured correspondent of the deceased physician —that could the lamented and amiable Wucherer rise from his grave he would be the last to seek to place his own legitimate meed of praise beyond that which is now by common consent and severally awarded to Lewis, to Bancroft, and to Manson.

Conclusion.—Since the above remarks were written a letter has appeared in the 'Lancet' from Dr. Da Silva Lima himself (March 23rd). In reference to the handsome manner in which he had thereby corrected a perhaps not altogether unnatural, error of interpretation on our part of M. Le Roy de Méricourt's observations, it is only necessary that I should in this place make due acknowledgment. As regards, however, the confirmation of the discovery of the sexually-mature worm in Brazil, there is a clear discrepancy between his statement in the 'Lancet' and that which Dr. Bourel-Roncière makes in the March number of the 'Archives de Médecine Navale.' It is of little moment whether the priority of the Brazillian "find" of the *Filaria Bancrofti* rests with Dr. F. dos Santos or Dr. Silva Araujo. From first to last Dr. Da Silva Lima and his eminent colleagues (including Drs. Moura, Magalhães, Pareira, and Almeida Conta) have taken a foremost part in this question, and they have, both individually and collectively, reflected lustre on their country.

The President objected to the manner in which the word elephantiasis had been used.

Dr. Bancroft would call elephant leg elephantiasis, and would apply the term leprosy to elephantiasis Græcorum. His cases in Australia were not so numerous as Dr. Manson's in Amoy; he had examined the blood of thirty lunatics, but had found no filariæ. Enlarged axillary and inguinal glands of a peculiar elastic feel were very characteristic, one case he tapped two or three times and let out a serous fluid stained with blood. On section the tumour appeared like a mass of minute piles with blood-stained serum. A patient suffering from what appeared to be steatoma of the face was brought to him, and on pricking the tumour he discovered the presence of filariæ. He could give a list of twenty diseases connected with this parasite.

Dr. Tilbury Fox had four propositions to place before the Society. 1. Filariæ are very plentiful in the body under various conditions of irritation without any symptoms of elephantiasis arabum. 2. It is very clear that elephantiasis may exist with filariæ; he had had himself two cases, and both of them had been carefully examined post mortem. 3. Lymph-scrotum and chyluria are frequently found together. 4. Abscess and filariæ are frequently found together. He did not think it had been proved that filariæ had been found in ordinary uncomplicated cases of elephantiasis arabum.

Sir Joseph Fayrer thought that the term elephantiasis was more applicable to what is also known as Bucnæmia, or elephant leg, rather than to leprosy. He stated that many cases of lymph-scrotum occur where elephantiasis is also present, and that many chronic ulcerations and enlarged tumours are due to the filariæ. He had no doubt but that the discovery was one of the greatest importance, though one could hardly yet realise that the mosquito is the means of propagating the disease. He did not think that elephantiasis arabum was due to filariæ.

The **President** asked whether filariæ had been observed in England?

Dr. **Cobbold** had had one young patient from Natal who passed Bilharzia hæmatobia, and in her urine three filariæ had been detected. He thought with Dr. Fox that some of the writers had attempted to prove too much; the facts of the development of this parasite were perfectly clear to his own mind. That filariæ are not found in all cases of elephantiasis does not prove that the latter disease is not caused by filariæ. Craw-craw, lymph-scrotum, and chyluria are undoubtedly due to filariæ.

The **President** thought that we were only on the threshold of our knowledge of this subject, and that we might congratulate ourselves that hitherto filariæ had not been discovered in a native of this country.

April 1st, 1878.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Mr. **Balmanno Squire** exhibited

FIVE CASES OF SKIN DISEASE.

Case 1.—*Rodent ulcer treated at a single operation by erasion only with a sharp steel spoon (living specimen.)* A man æt. 78, was admitted as an in-patient at the British Hospital for Diseases of the Skin on March 7th, 1878. He presented on the lower part of his right cheek, *i.e.*, over the lower jaw-bone, a rodent ulcer which had existed for four months.

The ulcer measured one and a half inches by one inch. It presented the characteristic appearances of the rodent ulcer, that is to say, a thin, white, hard, raised sinuous bead, running round the margin of the ulcer, the floor of the ulcer was depressed and irregularly, but only very superficially lobulated. It presented here and there a minute ecchymosis and was very easily made to bleed if accidentally touched.

On March 7th the whole of the floor of the ulcer and its beaded margin also were scraped away with a sharp steel spoon, the patient being under chloroform.

Now (three weeks afterwards) the ulcer has for the greater part healed up. It now measures only one inch by half an inch and there is a complete absence from it of the characteristic margin and floor of a rodent ulcer. It presents only the appearance of a simple, healthy, granulating sore.

The process of erasion as applied to rodent ulcer has recently been advocated by Prof. Auspitz, of Vienna.

Erasion is a more merciful treatment than deep destruction by caustic, and is more conservative of tissue than either deep cauterisation or complete excision which are the only other alternatives for dealing effectually with rodent ulcer. If the ulcer should eventually return after this operation, well, even then, it is to be remembered that rodent ulcer is wont to return after deep cauterisation or free excision.

Case 2.—*Lupus vulgaris treated at one operation only by erasion with a sharp steel spoon.* (*Living specimen.*) A boy, æt. 10, was admitted an in-patient of the British Hospital for Diseases of the Skin, on February 25th, 1878. He had been affected with lupus on his right cheek for seven years.

The extent and shape of the patch is shown in the diagram.

The character of the patch may be briefly described as follows: There was a thick, pale-yellow, moist scab covering pale flabby granulations exuding a thin white sanious pus.

On February 25th, 1878, the floor and margins of the ulcer were scraped away, the patient being under chloroform.

Now (five weeks afterwards) the ulcer which formerly measured about an inch across in all directions has become for the most part healed up, so that it measures only half an inch transversely by quarter inch vertically. It now presents the appearance of a simple healthy granulating sore, and there is a perfect absence of all trace of disease from all of the already skinned-over portion excepting only at a minute point or two.

Case 3.—*Severe general eczema impetigo treated only by free phosphorus administered internally.* (*Living specimen.*) A man, æt. 28, was admitted as in-patient of the British Hospital for Diseases of the Skin, covered almost completely with severe eruption of eczema-impetigo which had lasted five weeks.

He had had a previous attack a year before almost as severe as this attack which lasted about four months; this, however, never completely went off.

From his admission until now, embracing a period of ten weeks, he has been treated with nothing else than free phosphorus administered internally. The average dose throughout being eight phosphorus perles per diem, each perle containing one thirtieth of a grain, that is to say, about a quarter grain of phosphorus per diem.

He is very considerably improved, so that he now presents only mere traces of the eruption as it had existed prior to the commencement of treatment.

In this case the remedy has, from time to time been pushed to causing loss of appetite, and on three or four occasions to the production of vomiting, and his general health has become somewhat impaired so that he is now decidedly out of condition.

This plan has been pursued so that whatever good effect the remedy might have on his eruption might be effected within as short a space of time as possible.

CASE 4.—*Impetigo of the scalp and upper part of face treated only by free phosphorus administered internally.* (*Living specimen.*) A girl, æt. 9, was admitted an in-patient of the British Hospital for Diseases of the Skin, on January 29th, 1878. Her scalp was covered with thick moist crusts of Impetigo, and so were her eyebrows, and so also the central part of her forehead.

She had been in this condition for about six months before her admission, and had experienced a similar attack lasting four months in the early part of 1877.

On January 29th, 1878, she commenced taking phosphorus, the dose being gradually increased from one to as many as three perles, three times a day.

Since February 15th until now she has been taking this dose of nine perles a day, that is to say, for a period of six weeks. She was a little sick once or twice at the commencement of treatment, and on one or two occasions since.

She is now very considerably improved, but not quite well, the scalp being still decidedly scurfy.

CASE 5.—*Chronic circumscribed lichen affecting the whole of both sides of the face treated only by free phosphorus administered internally.* (*Living specimen,*) A girl, æt. 15, was admitted an in-patient of the British Hospital for Diseases of the Skin, on February 12th, 1878. She had been affected with her eruption for two years. It commenced about six months before the catamenia were established, which latter happened about eighteen months ago. The disease presented the ordinary characters of chronic lichen as affecting the face and it itched very considerably.

The patient has been treated with free phosphorus only, the treatment extending from February 12th until now, a period of nearly seven weeks. For the last week she has taken twelve pills a day, but for the preceding six weeks she had taken only nine pills a day.

At no time has the phosphorus occasioned her any inconvenience. Now she is very much better, the itching has almost completely left her, and she presents over the greater part of the former area of the eruption merely a comparatively faint stain, and at some parts not even any discoloration remains.

The **President** thought that Mr. Squire's cases were useful as showing what phosphorus is capable of effecting. Some of these diseases are constitutional, and phosphorus by improving the general health acts beneficially. In his opinion the case exhibited as rodent ulcer was one of epithelioma of the skin, and he did not think the disease was eradicated. His experience was in favour of potassa fusa rather than the use of the scoop. To propose the administration of chloroform to a patient would necessarily alarm him, and was not to be thought of in private practice unless exceptionally good results were to be obtained. The solution he employs consists of one part of water and two of potassa fusa; this should be applied cautiously to the affected surface, and will be found to give most satisfactory results.

Mr. **Squire**, in reply, remarked that his operation was not so very painful, in fact he believed it was less so than the application of caustic potash; the chloroform was not absolutely necessary.

Dr. **Tilbury** Fox though that the conclusion to be drawn from the eczema cases was not to give phosphorus. He agreed with the President that severe measures were not applicable in private practice; in obstinate cases he followed up caustic potash with the application of the acid solution of the nitrate of mercury. Dr. Veiello, of Constadt, stabs the lupoid tissue with a little instrument, consisting of six lancets, and then applies chloride of zinc. In hyperæmic cases the application of caustic potash is apt to be followed by the extension of the disease over the face. In rodent ulcer the objection to Mr. Squire's plan was that being "merciful" it was not sufficiently thorough. He would prefer, if he were himself suffering from the disease, to have the ulcer excised and the wound treated with some caustic, such as chloride of zinc.

Mr. **Bryant** quite agreed with Dr. Tilbury Fox that simple surface treatment of rodent ulcer was useless. After excision he would use the galvanic cautery. He thought that there were many cases of lupus in which free destruction of the tissues by the cautery was absolutely necessary.

Mr. **Erasmus Wilson**, in conclusion, thought that both lupus and rodent ulcer were diseases that must be stamped out.

Mr. W. F. **Teevan** then read a paper on the

SELECTION OF AN OPERATION FOR STONE IN THE BLADDER.*

The following conditions presented themselves for consideration in determining whether a stone ought to be crushed or cut out.

1. *Sex.*—Neither operation was barred by sex. Lithotrity was specially indicated in females, for in them the urethra was short, straight, and capacious.

2. Up to puberty crushing was not eligible excepting for the disposal of a little stone which could be got rid of at one sitting.

3. *Size of stone.*—It was quite impossible to say with mathematical accuracy what was the size of the largest stone which could be crushed with safety. Broadly speaking, all stones under one inch and a quarter could be got rid of by lithotrity.

4. Multiple calculi might be regarded, if small, as fragments of a crushed stone.

5. The local and constitutional conditions associated with an oxalate of lime calculus were more favorable for the successful performance of crushing than were those occurring with phosphatic stones.

6. *The patient's general health.*—So long as there was a fair chance of recovery, or even of giving patients a few months of comfort, it would be cruel to refuse to operate.

7. Renal disease was no bar to crushing, for as yet no one had been able to show what was the maximum amount of disease compatible with recovery after operation.

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* Published *in extenso*, 'Medical Press and Circular,' January 7th, 1879.

8. The sacculated or contracted bladder precluded crushing. In atony of the bladder crushing could be performed, as the fragments could be got rid of by washing out the organ.

9. An enlarged prostate did not exclude crushing provided it did not interfere with the explorations of the lithotrite.

10. Stricture of the urethra was remediable, and did not bar the crushing operation.

11. *Idiosyncrasy.*—A very few patients suffered from rigors and urethral fever every time an instrument was passed. They ought to be cut unless the stone was so small that it could be removed in a couple of sittings by lithotrity. A patient having a stone within the range of lithotrity, and being the subject of stricture and atony of the bladder, ought to be subjected to lithotrity at one sitting, and have the fragments immediately removed through the excision of external urethrotomy. The same might be said of a patient suffering from an enlarged prostate and stricture, or atony. If a cutting operation were required which kind of lithotomy was most eligible? In boys lateral lithotomy was specially indicated. In them median lithotomy is not justifiable, because in that operation the prostatic urethra is torn in its floor and the lad rendered sterile when he grew up. In adult males a cutting operation is required for the removal of large stones. Lateral lithotomy did not afford sufficient room for the removal of such calculi; the rectum was cut through or torn, and there was always the risk of dangerous hæmorrhage from the arteries, which were cut in their trunks rather than in their terminal branches. Lateral lithotomy sufficed for the removal of calculi up to one inch in diameter, but for larger ones the pre-rectal operation was the best, as it was equal in the space it afforded to two lithotomes. For old people recto-vesical lithotomy was indicated.

The President thought that Mr. Teevan's paper was an instance of the thoroughness with which English physicians and surgeons treated subjects to which they have devoted special attention.

Mr. Napier said that in his opinion there were other considerations besides the stone to be taken into account in selecting the operation to be performed; of these the most important was the condition of the bladder.

Mr. Bryant agreed with the bulk of Mr. Teevan's conclusions. In operating on persons who have extensive disease of kidneys the chances are largely in favour of death occurring. In these cases, if the patient is suffering agonies from the presence of the stone, it is our duty to operate simply with the view of giving relief to the sufferer for the last few weeks, or months, of his life. In such a case a cutting operation is the only one justifiable, lithotomy in itself being a simple operation. He mentioned the following cases as illustrative of the difficulties of comparing statistics. A child, in whom he had detected stone, was brought into the theatre to be operated upon, but failing then to find the stone he acted on the well-known rule of abstaining to operate, and the child was sent back to the ward. A few hours after he died comatose. A post-mortem examination showed grave disorder of the kidneys. A second case, a boy was sounded for stone, and died five days later. At the autopsy both kidneys were reduced to the condition of mere suppurating sacs. Had these two cases been operated upon the statistics would have shown two fatal cases that in reality were due to causes entirely apart from the operation. Therefore, statistics in which such cases are mixed up are not worth anything.

April 8th, 1878.

ERASMUS WILSON, F.R.C.S., F.R.S., President, in the Chair.

Mr. WILLIAM ROSE showed a boy, æt. 11, from whom he had removed, at the Royal Free Hospital, the left half of the lower jaw. He had suffered from swelling over the left jaw for six months, and it was increasing rapidly. He was admitted into the Royal Free Hospital and watched for a fortnight, at the end of which time the tumour, having a uniformly smooth surface apparently involving the whole circumference of the jaw, had got much larger. There was pain, and slight enlargement of the lymphatic glands under the angle of the jaw, but the general health was good. Mr. Rose removed the tumour three weeks ago by dividing the jaw between the left canine and first bicuspid teeth, and disarticulating on the same side. The incision followed the line of the jaw, the lip being left uncut. The patient made a rapid recovery, and was running about the ward on the eighth day. There was but little deformity, but, of necessity, slight left facial paralysis; speech good. The tumour was found to involve the whole of the ascending ramus of the left jaw, and was the size of an orange; it was solid throughout. Under the microscope it presented all the characteristics of a spindle-celled sarcoma. The chief points to be observed were, the youth of the patient, the rapid growth, and the quick recovery made.

Mr. Bloxam considered it was important to remove the inter-articular fibro-cartilage in these cases. A patient came under his care at the Charing Cross Hospital in whom the disease had recurred at the fibrocartilage, necessitating a second operation.

The President asked whence the disease had taken its orgin? from periostium or bone?

Mr. Rose said, in reply, that it was probably a sarcomatous growth, beginning in the periosteum and affecting the bone secondarily.

Mr. Fisher showed two patients (boys), æt., severally, 8 years—

CASES OF CONGENITAL TALIPES.

1st. *Severe equino-varus of both feet* (casts shown).—The tendons of the tibialis posticus and anticus muscles were divided, and the varus reduced. The plantar fascia was then cut and the contraction of the sole being overcome, section of tendo Achilles was performed, and treatment of the equinus proceeded with. The boy was under treatment from August 7th, 1877, to March, 1878 (seven months). Four months of this time were occupied in reducing the varus, and nearly two months in overcoming the plantar contraction.

The second case was one of congenital valgus of both feet (casts shown). The deformity was unusually severe, and the author adopted the following plan of treatment. The tendons of the extensor longus digitorum, extensor pollicis, and tibialis anticus muscles were divided in the right foot, and those of the two long extensors only in the left foot. Scarpa's shoes, with divided sole plates moved by rotation racks, were then employed, and the natural shape of the foot was fairly well restored. The treatment was begun on May 10th, 1877, and carried on to October 30th of the same year. Previously the boy's gait was extremely awkward and ungainly, from his treading only upon the inside of the foot; he is now able to walk well, and with perfect comfort. Both the boys were shown, and Mr. Fisher claimed that his plan of treatment compared favorably with those cases that had lately been brought before the notice of the Society.

Mr. W. **Adams** thought that these were most admirable examples of the ordinary mode of treatment of talipes without any large surgical operation.

The **President** asked what length of time the boys had been under treatment?

Mr. **Maunder** agreed with Mr. Adams that in the majority of cases the ordinary treatment as practised by orthopædic surgeons was the best. He asked whether it would not have been quite possible to have treated these cases by instruments without tenotomy? A patient who had been for two years laid up came under his care with an extremely flat foot. This was treated by gradually building up an arch to the foot by placing successive layers of leather inside the boot.

Mr. **Bloxam** asked whether the these cases had been treated before they came under Mr. Fisher's care? He did not think operation for removing bone in children was justifiable.

Mr. **Fisher**, in reply, said that the building-up plan is only successful in the less severe cases. The varus had been nine months under treatment, the valgus six; they had not been previously operated upon.

Dr. **Sansom** read a paper entitled

NOTES ON SOME OF THE COMMON DISORDERS OF CHILDREN.*

They were suggested by an experience of nine years at the North-Eastern Hospital for Children. More than half the cases which came under treatment were those of disorder of the alimentary canal; and taking 500 cases promiscuously, 145, or 29 per cent., were disorders due to the presence of intestinal worms. These figures indicate an average prevalence. In some towns of Germany the percentage observed in post-mortem examinations in children is said to vary from 26·6 to 41·6. In the cases now given, however, the patients suffering from skin disease, and those whose symptoms were due to other causes are excluded. The general prevalence, therefore, is much higher than is indicated by the figures. The symptoms produced by the parasites are divisible into a large class of direct, and a smaller class of reflex, phenomena. The commonly described symptoms are prominent in only a fraction of the subjects.

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* This paper has been published *in extenso*. See 'Medical Examiner,' May 2nd, 1878.

The diagnosis is made by the direct observance of the parasites in the dejecta, or about the body, or by the discovery of the same by microscopical examination of the materials adhering to the fingers and finger-nails. The chief intestinal parasites of children in this country are the ascaris lumbricoides and the oxyuris vermicularis the latter being the most frequent. The proportions vary in different countries and districts. The ova of the ascaris may enter the economy by contaminated drinking water, or by any uncleanly media which has been in contact with the parts. Ova of oxyurides may be transmitted by direct communication, or by the ingestion of articles of diet to which their bodies have become attached. An individual once affected becomes a constant source of self-contamination, for the ova are conveyed by the fingers from the neighbourhood of the rectum to the mouth. Most of the symptoms produced by these parasites are the direct results of the irritation of themselves, or of their ova. The author believes that they not only thus produce the symptoms referred to the rectum and intestines, but that they cause unhealthy sores about the groins, whitlows and ulcerations of the fingers, irritation of the nares, as well as many of the forms of impetigo. Moreover, their direct irritation produces stomatitis, an almost pathognomonic hypertrophy of the papillæ at the root of the tongue, pharyngitis, and tonsillar ulceration by recurrence leading to hypertrophy. The peculiar cough of vermacious children the author believes to be due to local irritation of the fauces thus occasioned. Reflex phenomena are present in the subjects of both forms of parasites, but especially in those who are hosts of lumbrici. Epilepsy, hemicrania, and chorea were occasioned in cases quoted. The author considered that the first reflex effect is vaso-motor. In some cases a strong influence is exerted on the heat centre (worm fever). In the cases of both epilepsy and chorea the effect is probably upon the arterioles of the nervous centres. So by formation of thrombus, or otherwise, an organic change is brought about in the nervous elements. As regards treatment in case of lumbrici judicious exhibition of santonine is the best plan. For oxyurides repeated administration of aperients or enemata are necessary; oxyurides inhabit the cæcum, so ordinary enemata may be unavailing, irrigation of the whole of the lower bowel by Hegar's plan may be necessary. A concurrent tonic treatment is most essential. So long as the ova of the parasites are imported into, or ever develop in, a healthy intestine they manifest no ill effects, because the vigour of intestinal action never allows them to accumulate. If the bowel, however, becomes weak, or if it secrete unhealthy mucus in which the parasites become concealed, they multiply and become dangerous pests. Preventive treatment must go hand in hand with curative. Raw vegetable food should be excluded. Water and milk should be boiled before use. All food should be scrupulously clean. The hands, and especially the finger nails, of children suspected of harbouring these pests should be cleaned many times a day with soap and water. Only by rigid cleanliness, careful diet, and judicious treatment can these pests be eradicated.

Mr. MAUNDER said he had been recently called to a medical man who had treated himself for threadworms by injecting, per rectum, one part of tincture of perchloride of iron to three of water, causing extreme pain and tenesmus.

Dr. EDIS spoke as to the frequency with which vaginal leucorrhœa in children was due to the threadworms creeping into the vagina; it was necessary to bear this in mind in medico-legal cases. He mentioned the case of a lady in whom the oxyurides had caused leucorrhœa and intense pruritus; and he pointed out the possibility of infection from cats. He had seen grave effects resulting from the use of a solution of carbolic acid as an injection.

Dr. DE HAVILLAND HALL said that the central streak in the tongue was met with in most abdominal affections; he spoke in praise of a Swiss baker who had announced his determination not to suffer his bread to be handled by intending purchasers. He advocated the use of iron both by the mouth and by the bowel, after the employment of free purgation in the treatment of oxyurides.

Mr. COLES spoke as to the frequency with which intestinal worms are met with among children in China. The lumbricus is the most common. All the children suffering from worms have, in that country, a loathing for food. He advises free use of salt with food.

Mr. WORDSWORTH said that during a stay of two years in the West Indies he had not met with a single instance of the common threadworm. Lumbrici are very common. He mentioned a case of tetanus which had recovered after vomiting one of these worms. He asked for the best mode of getting rid of threadworms.

Mr. JOHN BRUNTON was quite certain that these parasites are incompatible with perfect health; they are met with in children with defective digestion. He first employs a purgative to clear out as many worms as possible, he then gives some tonic to enable the child to digest its food. He had found repeated doses of linseed oil in emulsion, or with orange wine, the most successful remedy.

The **President** stated that the skin will respond to reflex irritation, erythema in some cases, eczema in others, and so on, being the result. As an instance, he mentioned an obstinate case of labial eczema due to the irritation of a carious tooth. He spoke of the efficacy of copaiba in the treatment of threadworms.

Dr. **Mair** said that, in cases in which santonine had failed, he had found a combination of turpentine with castor oil and a little male fern most useful. He had also found great benefit from the injection of santonine by the bowel.

Dr. **Sansom** replied that in his opinion the skin affections were not of reflex origin, but were the immediate result of the irritation of the worm, the ova having been found in the discharges. He likewise considered the affections of tongue, mouth, and throat to be due to the same cause, he agreed with Dr. Edis in his condemnation of carbolic acid as an injection. Cases of ascaris mystax (the threadworm of the cat) had been met with in man; he did not mention the lateral streak of the tongue as a sign *per se.* Salt was certainly indicated. Any article of diet, such as brown sugar, which goes through many hands, is to be suspected.

April 15*th,* 1878.

Alfred Wiltshire, M.D., in the Chair.

Mr. **Owen** showed living specimens of two cases of

CONGENITAL WRY-NECK.

1. A boy, in-patient of St. Mary's Hospital, with extreme contraction of clavicular portion of right sterno-mastoid. 2. A girl who had been treated at the Hospital for Sick Children. The treatment was simple, and proved satisfactory; it was the same in both cases. Each was well marked, especially as regards the distortion of the face. The contracted muscular bands having been divided subcutaneously, small pads of dry lint were strapped over the separate

punctures until the small skin wounds had soundly healed. The patient was then made to carry a weight about the ward in the hand of the affected side, the neck being inclined so as to exert a constant strain upon the muscles and fasciæ which had been dragging the head towards the shoulder, the neck was frequently rubbed and shampooed, and the head daily coaxed towards a correct position by a gentle, but firm, and constant manipulation. By night the child was made to lie on the affected side upon a firm mattress, the head being supported by a sand pillow of proper thickness. No mechanical apparatus, band, or belt was used, and a thorough cure was the result of this treatment; the face also steadily improved. Mr. Owen trusted that, although there might be nothing novel in the plan he had adopted, it might be thought worth recording as the result of a rational method of treatment without the usual expensive and complicated apparatus, although every case of congenital wry-neck might not yield to it. He would remark that the little girl nearly succumbed during the operation owing to the entrance of air into a large vein which had been wounded, the child turned extremely blue, and convulsively struggled for breath.

Dr. WILTSHIRE thought that these cases showed the excellent result of surgical treatment rationally applied.

Dr. DE HAVILLAND HALL asked the length of time the patients had been under treatment?

Mr. MAUNDER mentioned a case in which he tried all measures short of an expensive instrument before resorting to tenotomy, without success, but after division of the muscle the case did well; only one puncture was necessary to divide the two origins of the sterno-mastoid. He doubted the wisdom of discussing with the patient's friends all the possible complications that might result from the operation. He mentioned cases of torticollis caused by traction during birth, and others due to syphilis.

Dr. WILTSHIRE said that torticollis was rarely met with in children delivered by the vertex, but was more frequent in cases of breech or footling presentation; the muscle usually ruptures at the junction of the sterno and clavicular portions; an extravasation of blood taking place in the neighbourhood. Some cases are undoubtedly of syphilitic origin, but these occur later; contraction of the sterno-mastoid sometimes arises after the acute specifics. In a severe case that came under his care, the patient, a girl, did not get well until after the period of puberty. He asked whether it would not be sufficient to divide one head only, or the muscle at the junction of the two parts.

Dr. **Gilbart Smith** remarked that there were still some signs of irritability about the muscle in the boy.

Mr. **Owen** agreed with Dr. Wiltshire as to the causation of the disease, and also as to the condition of the swelling. He thought it was advisable to operate early in these cases; it is better to divide the muscle low down to avoid the risk of hæmorrhage from the fleshy part of the muscle, and he prefers making two incisions. The cases had been five and six months, respectively, under treatment. The few fibres that had escaped division were somewhat irritable.

Dr. **Drysdale** read a paper on

SYPHILIS AS A CAUSE OF APHASIA AND LOCOMOTOR ATAXIA.

He thought that the subject of the causation of these diseases had not been so much considered as it deserved, but both of these diseases had been comparatively recently studied. With the exception of cases caused by the plugging of the sylvian artery by an embolus, Dr. Drysdale thought that syphilis was the possible cause of aphasia in most instances of its occurrence, and he gave the history of several cases where these symptoms of cerebral syphilis had occurred nine and eleven months after the chancre; as also cases where the symptoms had appeared very late in the history of the disease, such as twenty or thirty years after the occurrence of the chancre. On reading over the history of a number of cases of syphilitic aphasia and comparing them with the results of his own experience, Dr. Drysdale found that whilst in common aphasia, from plugging of arteries, the accompanying hemiplegia was almost invariably found to be on the right side; in syphilitic aphasia as many as fourteen cases of left hemiplegia had been cited, to eighteen of right hemiplegia as an accompaniment of the aphasia. This, then, was an important point in the diagnosis of the disease. Aphasia was accompanied with paralysis of both upper extremities also, in one case, and by paraplegia in four cases. There was paralysis of the right arm alone in two cases, and of the left in one. In three cases paralysis of both upper and lower extremities was said to have existed. In one case there was right hemiplegia and blindness, and in another ptosis. In four cases collected by Dr. Tarnowsky there was no paralysis at all.

In eleven cases reported by that author there was great loss of intellect. In syphilitic aphasia ptosis is a concurrent affection, and not unfrequently, when the patient is in the secondary period of the disease, aphasia comes on, as when roseola and iritis are present. One patient was in the fifth month, the other in the seventh, after the appearance of the chancre. In such cases no post-mortem lesions may be discoverable should the patient die of the attack. Dr. Charles Maurice records a case of aphasia four months after the occurrence of the chancre. The prognosis of syphilitic aphasia seemed, according to Dr. Drysdale's experience and reading, to be very grave indeed, although medical literature contained some surprising cases of cure obtained by means of large doses of iodide of potassium. The patients may live for many years aphasic, but usually without capability to carry on the business of life, and sooner or later they succumb to the disease of the brain. Mercury, unfortunately, does not seem to be a prophylactic to cerebral syphilis. M. Jullien, who had collected 237 cases of this form of syphilis, found only one case in fifty which had been unhealed by mercury; whilst out of forty-seven treated by mercury from the beginning, there were seven cases of brain disease, and in 111 treated with mercury for the secondary disease, there were eleven cases of cerebral disease. Large doses of iodide of potassium were beneficial in syphilitic aphasia when supervening two or three years after the chancre. In the earlier cases it was not much use. It might be given in doses of fifteen to twenty grains every two hours, for a time, with or without very small doses ($\frac{1}{50}$th gr.) of the perchloride of mercury. With regard to the causation of locomotor ataxia by syphilis, almost all the writers on diseases of the brain and spinal cord rejected, as it were, unanimously that syphilis could be regarded as a true cause of that complaint. Locomotor ataxia was more frequent in males than in females, and occurred at ages from twenty-three to sixty, and Dr. Drysdale believed that it was frequently seen that syphilis was an antecedent to this disease; every one admitted syphilis to be a cause of paraplegia, of epilepsy, and of cirrhosis of the liver, and yet there was nothing generally pathognomonic in the symptoms of these maladies when caused by syphilis. Syphilitic ataxia of the lower extremities had also no pathognomonic symptoms to reveal its nature; and hence it was generally quite forgotten that syphilis might be a cause of sclerosis of the posterior columns of the cord just as it caused hardening in the liver or in the cerebral tissues. Sclerosis was one of the forms which syphilis is wont to produce in other organs, and there seemed, therefore, no difficulty in admitting it as a *vera causa* in sclerosis of the posterior column of the cord. There is a very frequent history of syphilis in cases of locomotor ataxia; in the last seven cases he had seen there was in five a history of true syphilis. Dr. A. Fournier found syphilis as an antecedent of locomotor ataxia in no less than twenty-four cases out of thirty he had examined, and has, besides, collected eighty cases from those recorded in medical journals where syphilis had occurred in the history. Another observer, Dr. Susday, had mentioned its occurrence in eight cases out of ten.

It was considered a telling argument against the view of locomotor ataxia being syphilitic "that it was considered generally so incurable that it had been styled 'progressive locomotor ataxia.'" This was not a good argument, because when ataxia was well marked the posterior columns of the cord were destroyed immediately, and could not be restored, but if it were once thought possible by practitioners that locomotor ataxia might often be due to syphilis, heroic treatment would at once be made use of at the commencement of the disease, and, according to his own experience, some apparently commencing cases of the disease might be arrested by large doses of the iodide of potassium. Terssier, of Lyons, Carrè, A. Fournier, as also Dujardine, Beaumetz, Dr. Charrière, have also published cases where mercury and iodine seemed to have arrested the disease, either for years or permanently. Such being the state of the question, Dr. Drysdale ventured to assert: (1) That syphilis was not unfrequently a cause of locomotor ataxia; and (2) whenever there was the slightest possibility of syphilis being the cause, the patient should have the chance given him of a vigorous treatment by means of the largest doses of iodide of potassium he could take without iodism, with or without the addition of doses of $\frac{1}{15}$th of a grain of the perchloride of mercury.

Dr. WILTSHIRE pointed out that the ages of two of the patients were those in which degenerative changes are apt to begin. He asked whether the cases of aphasia without paralysis were not due to glossoplegia, and whether the patient with aphasia and left hemiplegia were not left-handed? He spoke as to the great value of mercury even in the later manifestation of syphilis. The prognosis would depend largely on whether the aphasia were due to increase of tissue, in which case it would be good, or to plugging, when it would be bad. He could not doubt as to the syphilitic origin of locomotor ataxy. He suggested that the excessive sexual intercourse was the result rather than the cause of the ataxy. It must not be forgotten that lightning-like pains are present also in gout.

Dr. GILBART SMITH spoke of the early diagnosis of locomotor ataxy by striking the patient below the patella. He mentioned an interesting case of aphasia without paralysis; the patient died suddenly a week after the appearance of this symptom. At the post mortem a neoplastic growth was found in the anterior lobe of the brain on the left side.

Dr. DE HAVILLAND HALL doubted as to the syphilitic origin of four of the cases of aphasia; it was hardly fair to assume that syphilis was the cause of the disease simply because the patient at some period of his life had suffered from a sore; in one case, however, the syphilitic origin seemed to be clear. He asked Dr. Drysdale how he would explain the occurrence of the aphasia in the patient in whom it had occurred four months after the primary sore; it was hardly possible that a gumma could have developed in the brain in so short a period.

Dr. JAGIELSKI thought it was exceedingly important in these cases to have something else to rely upon besides the iodide of potassium and mercury. He mentioned the case of a patient whom he treated with five-grain doses of the iodide every two hours; after he had taken sixty grains vomiting commenced; in this instance koumiss, by alleviating the digestive disturbance, was very useful, he also used the hot electric bath.

Mr. ASTLEY BLOXAM stated that he had not met with cases of locomotor ataxia at the Lock Hospital, though he had seen cases of syphilitic origin at Charing Cross Hospital. He agreed with Dr. Hall in doubting the syphilitic origin of the first four cases; the absence of any reaction from the treatment seems convincing on this point. Syphilis is common enough in women, why should not locomotor ataxy be met with in them as well as in men.

Dr. ROUTH thought that there was a fashion, at the present time, to attribute everything to syphilis; however, he traced all the cases of locomotor ataxy coming from India, to syphilis. He would advise that other remedies, besides iodide of potassium and mercury, should be tried in these cases.

Dr. DRYSDALE, in reply, said that the cases were instances of aphasia, and not of glossoplegia. In all the cases there was, more or less, a continuous history of troubles, evidently of a syphilitic origin. The aphasia coming on four months after infection he would attribute to disturbance of the circulation.

April 29th, 1878.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Mr. Francis Mason brought forward a case (living specimen) of

CONGENITAL DEFORMITY OF RECTUM.[1]

The patient, a boy, æt 9, had a congenital malformation of the rectum and external organs of generation. He was sent to Mr. Mason by Mr. E. J. Day, of Dorchester. The scrotum was divided in the median line, the sides resembling the two labia majora in women, each of which contained a healthy testicle; a glans penis placed in the position of the clitoris was, like the testicles, of usual size in a boy of the patient's age; there was no urethra on the under surface of the glans, but a shallow groove indicating slight hypospadias. About the situation of the meatus of the urethra in the female was a circular orifice of the size of a quill pen, which led into a common cloaca, and through which the urine and fæces passed. The patient could retain his urine, but the fæces escaped involuntarily. On introducing a female catheter, it passed backwards to the situation of the anus, and the thin skin, in this region, could be readily protruded by the instrument; and by pressing the part in a forward direction a feculent discharge was induced. The catheter could not be made to enter the bladder, or if it did enter that viscus no urine passed through it, because it became blocked with fæces. The pelvic bones were apparently normal, and the boy enjoyed excellent health. Mr. Mason expressed his opinion that nothing could be done for the patient, and added that an unsuccessful attempt had been made to establish an anus when the lad was a baby a few months old.

The President asked whether there was a perfectly free passage for the fæces?

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[1] This paper is published *in extenso* in the 'St. Thomas's Hospital Reports' for 1879.

Mr. **Bloxam** said he supposed, from the fact of there being a common passage for urine and fæces, the motions were hardly ever solid.

Mr. **Royes Bell** gave particulars of a case, under the care of the late Sir W. Fergusson, in which the latter had passed a catheter down the urethra towards the rectum, and then cut down on the point of it.

Mr. **Owen** suggested that a fæcal abscess had opened through the urethra; he advised the enlarging of the opening by dilatation with sponge tents. As regards any other operative procedure, he thought it advisable to wait for symptoms.

The **President** regarded this as, probably, a case of hermaphroditism; some time ago he had a patient under his care, in whom there was a common cloaca receiving the vagina and rectum, and a few years later he was consulted as to the question of marriage, which was consummated and the lady became pregnant, notwithstanding the deformity.

Dr. **John Brunton** had recently had a case of hypospadias, somewhat similar to the present, the rectum, however, was complete.

Mr. **Bryant** regarded the case as one of great interest and rarity, inasmuch as the digestive tract, as well as the urino-genital, was involved; he did not think it was a case of hermaphroditism. He would not be satisfied to leave the boy in his present condition, but thought it advisable to adopt some operative procedure. He suggested that it would be well to introduce an instrument through the present opening, passing it backwards towards the rectum, and then to cut down upon it.

Mr. **Napier** remarked on the healthy condition of the child, in spite of the difficulty of defecation.

Dr. **Wiltshire** thought that dilatation would afford all the information required. He would begin with laminaria tents, and then sponge tents; when the opening was sufficiently large he would explore the cavity with the finger. He compared the condition of the boy to that which exists in birds.

Mr. **Mason**, in reply, stated that the boy, when constipated, had to expel the fæces by pressure. He had tried to pass a catheter through the opening, but had failed to discover whether it entered the bladder or not, as the orifice of the catheter became blocked up with the fæces and prevented the urine from passing. If he were to adopt any operative procedure he would feel disposed to follow the suggestion thrown out by Mr. Owen, and endorsed by Dr. Wiltshire.

Mr. Bryant then read a paper on the

SURGICAL TREATMENT OF INTESTINAL OBSTRUCTION, WITH TWO CASES OF ENTEROTOMY.[1]

May 6th, 1878.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

The Annual Oration was delivered by Dr. Alfred Carpenter, a copy of which has been sent to each Fellow.

At the conclusion of the oration, a vote of thanks to the orator was proposed by the President, and carried by acclamation.

The Conversazione followed, during which the Band of the Royal Artillery played and sung.

October 21st, 1878.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

The President then delivered the following address:

Gentlemen,—Our attention is continually drawn by the periodical literature of the day to the question of centenarianism. A great medical authority, namely, Hufeland, in his 'Art of Prolonging Life,' has set down the age to which we might hope to attain at 200 years. It is a part of the business of this Society to work out that problem by endeavouring to discover the best means of preventing and curing disease, and at the same time, and most emphatically, of preserving and maintaining health. An eminent Fellow of this Society, one of those upon whom the honour of occupying this chair has devolved, once expressed to me his strong conviction that man ought never to die from ordinary disease; but, if any doubt should present itself with regard to centenarianism in man, there can be none as to the permanence of the institutions which he creates. This excellent Society, for example, dignified with the proud name of *The Medical Society of London*, celebrates this evening its 106th Anniversary. It may be said truly to be full of years, and it is, moreover, no less full of constituent members and of financial means, nevertheless, it is always a happiness to add new names to our numbers and to drop new subscriptions into our coffers; the former bring us wealth of intellect, the latter that more worldly wealth which we know so well how conscientiously and usefully to apply. It was said of Sir C. Wren, by a visitor to St. Paul's Cathedral, Si monumentum quæris? Circumspice. In the same spirit I may say of this Society, if you would know what it is look around upon its members and their works, and, I will also venture to say, at its ornaments. No altar of science could be graced with a more soul-stirring impersonation of earnest thought and honest search after truth than the august assemblage of our Fathers, represented on the canvas that hangs over the President's chair, and perhaps even more impressively in the engraving which brightens the walls of our library. Our younger members cannot but be inspired by its contemplation to become such as they; our older members will be confirmed in their determination to maintain the honour of the past and perpetuate the renown of the future. Our immediate Past President remarked to me, when I first took my place in this chair, that nothing had struck him so forcibly as the earnest and conscientious intent and work manifested by its contributions and by its discussions. My own experience, so far as it has gone, tends to corroborate his views. The President, whom we see seated at the head of the Board in this famous picture by Copley, is Dr. Sims, the speaker is Dr. Lettsom, and the rest, nineteen in number, are men whose names are still held in high respect.

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[1] See 'Lancet,' May 11th, 18th, and 25th, and June 1st, 1878.

It is worthy of note that of the 21 figures, 17 are those of physicians, and 4 only of surgeons, while one alone is a Fellow of the Royal Society. One of those present standing at the table is Edward Jenner, the discoverer of the protective influence of vaccine lymph against smallpox, a discovery which has spread its benign influence throughout the entire world. On the walls of the room are serried columns of the Past Presidents of the Society. Among the foremost of these will be observed a name which deserves to occupy a high place in the estimation of every member of the profession; it is that of Willan.

In the more recent additions to the list we find the names of numerous Past Presidents, whom it is our pleasure and gratification to see amongst us, still encouraging us by their presence and animating our discussions with their stores of varied information and experience. Of these latter we shall be pardoned a sentiment of pride in enumerating the names of the President of the College of Physicians, Risdon Bennett; of a Past President of the College of Surgeons, Henry Hancock; of Hird, Garrod, Greenhalgh, Hare, Henry Smith, Richardson, Gay, Andrew Clark, Bryant, Habershon, Routh, Adams, and Buchanan. The name of Willan, who first in this country gave a scientific character to the comprehension and classification of cutaneous diseases, reminds us how much we are indebted to the labours of our predecessors, and how we may be influenced for good or for evil by their reputation, Linnæus classified the vegetable kingdom, the German school applied his views to cutaneous diseases. Willan primed and shaped the Teutonic system to the purposes of his countrymen, and in that form it has been transmitted even to ourselves. Suissen laid the foundation of the natural families of plants. Alibert adopted a similar principle for cutaneous diseases, but Alibert failed to secure the popularity of Willan. The labours of Rokitansky inspired the classification of Hebra, and the views of Hebra continue to receive a hearty acceptance amongst us at the present hour. What is our practical position to day in this respect? Terms like eczema, psoriasis, prurigo, lepra, tinea, lupus, &c., which once sheltered a secret as mysterious as those of freemasonry, have become terms of common usage. Aberrations of circulation and aberrations of nutrition are the sum and substance of their pathology. During the already short period of my Presidency I have listened with attention and instruction to a series of valuable papers which have been read to the Society by its Fellows, and I may here remark in comparing 1878 with 1785, the probable date of our picture, that in place of the physicians exceeding in majority the number of the surgeons, the surgeons have more than doubled the number of the physicians as contributors to our common store of knowledge, a fact which may be taken in illustration of the advanced condition of surgery at the present day. Scientific honours have likewise been acquired in large proportion by our profession, showing a general as well as a special movement of advancement.

The President then briefly commented upon the salient points of the more important papers read before the Society during the past session and concluded with the following remarks:—" The Orator of the year, Dr. Carpenter, of Croydon, brought under our attention, in an earnest and temperate address, the important question of the use and the abuse of alcohol, a social question which, perhaps, more than any other, is occupying the public mind of the present day. This grave subject comes before medical men in the threefold light of its moral, its social, and it therapeutic bearings. In its moral aspect medical men will all be of one opinion, that, rather than be abused, it were better that alcohol as an article of diet should be abandoned altogether. In its social aspect we may be induced to consider its utility when employed in moderation as a means of assisting and promoting digestion, and in some wise of invigorating the nervous system, and thereby the vital powers of the organism; and in its medical aspect we may be disposed to consider with more than usual care the circumstances and the doses in which it may be appropriately given. Perhaps, were it alone employed as a medicine, and not as a luxury and an indulgence, no objection could be offered to its use. But it may be said by some to be therapeutical even when taken as an element of diet, since a slow and imperfect digestion implies a weak organ and organization, and the prèsumed remedy is thereby brought into the category of medicinal substances; on the other hand, it is argued by the advocates of total abstinence that were alcohol never to be used it would never be required; but, against this, it may be presumed that we should eliminate those examples of failure of strength and health which result from the exigencies of so-called civilisation. This question of total abstinence from alcohol is singularly illustrated by the present wide-spread use of tobacco. As I myself never smoke or consume tobacco in any other way I can never know the want of tobacco, and I might argue, as some would think selfishly, that tobacco was utterly unnecessary for the well-being of society. But the smoker will tell us that to him it is indispensable, that it assists digestion, corrects acidity of stomach and flatulence, and promotes the peristaltic action of the alimentary canal; in other words, use has made it a necessity of his organization; on the other hand, it [may easily be proved that the digestion of the non-smoker is as well, if not better, performed than that of the smoker, and that a large proportion of the population, viz. the women and children, live very well without it. It cannot be said that their digestion and assimilation suffer from the want of it, or that they would be improved by its use, and the only conclusion that we can come to is that the smoker has created a necessity, and made himself the victim of his own weakness. I take the instance of smoking simply to show how a bad habit may be wilfully created, and that it may subsequently become a necessity of existence. A difference must be admitted between tobacco and alcohol, the former begins as an indulgence, the latter is a medicine, and in some respects a food. As food it is brought within the reach of all classes, and, therefore, is all the more likely to be abused.

Looking forward to the future of the Society, I may mention that it is in contemplation to devote a small portion of the time of certain of our meetings to demonstrations of microscopical subjects, to be accompanied with a short explanatory notice, and to be restricted as much as possible to objects of practical interest. In concluding my observations on ourselves, our doings, and our expectations, it might be thought to be a part of my duty to exhort you to persevere, but this I am happy to say, is perfectly unnecessary. Our special text, work! work! work! has been uttered by many distinguished members of our profession; we know it to be the medicine of success, and its teachings are universally acknowledged and acted upon by our professional phalanx—not success in worldly eminence, but success in the attainment of professional honour and of the means of alleviation of the pains and sorrows of the public with whose well-being we are entrusted."

Dr. Allchin showed a specimen of—

PERFORATING ULCER OF DUODENUM.

The ulcer was clean-cut and had thickened edges, and would admit of the passage of a cedar pencil; close by was the seat of a commencing ulcer. The patient, a man æt. 25, applied to Dr. Allchin, apparently suffering from the symptoms of colic. There was no elevation of temperature, no increased frequency of pulse, and the man was relieved by pressure in the epigastrium. He had been constipated seven days; there was no vomiting. The author treated him as for colic, and was astonished to hear of the patient's sudden death on the next day. There was a history of a burn twenty years previously.

The **President** asked whether the man had suffered from fever?

Dr. **Broadbent** asked to what extent extravasation had taken place in the abdominal cavity? and at what time was it probable that perforation had occurred?

Mr. **Gant** asked whether the intestines were empty?

Dr. **Allchin**, in reply, stated that there were four or five pints of altered milk in the abdominal cavity. Collapse seemed to have taken place ten hours before death. The intestines contained fæcal matter

Dr. **Lauder Brunton** then read a paper on—

VENOUS PULSATION,

of which the following is an abstract:

In considering pulsation in the jugular veins, it is necessary to exclude the apparent pulsation communicated to them by the pulsation of the carotid. In the absence of cardiac lesion, some writers have attributed pulsations in the jugular veins to contraction of the right auricle, and others to the aorta pressing blood out of the intra-thoracic veins into the jugular during the distension caused by the cardiac systole. Dr. Brunton's observations have shown him that venous pulsation is sometimes due to distension of the aorta acting in a somewhat different way from that described by Friedrich. In cases of this kind the pulsation is very marked in the left jugular, and appears to be due to alternate compression and relaxation of the innominate vein by the aorta during its dilatation and contraction at each beat of the heart. In every instance in which this unilateral pulsation has occurred the patient has been a female, and more or less anæmic. Notes of three cases were read in illustration of the subject.

In Case I the pressure excited by the aorta on the left innominate vein was insufficient to produce the pulsations when the circulation was quiet, but, it did so when it was excited by emotion.

In Case II it was insufficient to produce it when the thorax was dilated and the sternum raised by inspiration, but did so when the thorax had collapsed and the sternum had fallen during expiration.

In all three cases the peripheral vessels were dilated, so that

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[1] This paper has been published *in extenso*, see 'Medical Press and Circular,' July 2nd, 1879, p. 1.

the veins were filled very rapidly during compression, and but for this no appearance of pulsation would have been produced.

Sir Joseph Fayrer and Dr. Brunton found that occasionally the pulmonary veins and the vena cava in rabbits might be seen to pulsate rhythmically for a considerable time after the auricles and ventricles had become perfectly still; this, which is not a simulated but a real pulsation, has been omitted from modern text-books, although it is to be found in the older writers. These rhythmical contractions of the pulmonary veins and of the vena cava occur in animals killed in various ways. They do not occur frequently and the conditions under which they take place are at present unknown, nor can it be stated whether they occur in man, but from observations made on decapitated criminals, it seems not improbable that such contractions may occasionally occur in the human subject.

In one case it was noticed that the contraction of the pulmonary veins was not synchronous with that of the auricles. Supposing that in a case of mitral regurgitation a similar rhythmical contraction should occur in the pulmonary veins, a most powerful obstacle would be opposed to the backward flow of the blood.

The property of contractility possessed by the veins is little regarded, and yet it is one of great importance in reference to the maintenance of the circulation in health and in disease.

It is obvious that if venous radicles contract they may oppose a resistance to the flow of blood in the capillaries, and by thus increasing the pressure within them may cause more fluid to exude from them into the tissues, while, on the other hand, a rhythmical contraction may forward the outward progress of the blood, and may prevent some of the injurious effects which are usually noticed in tricuspid regurgitation.

The action of drugs upon the veins has hitherto received very little attention, and therefore it is not possible at present to bring together pharmacological experiment and clinical observation so as to give any efficient aid to the treatment of these diseases.

But it is probable that before long some definite knowledge of the action of drugs in the veins may be obtained which will assist us in so doing.

Dr. LAUDER BRUNTON also exhibited an arrangement for testing the competency of the valves of the heart, which was suggested to him by some experiments of Dr. Bayer, of Leipsic. The apparatus consisted of the nozzle of an enema syringe inserted into the ventricular cavity, and connected with a Higginson's syringe, when water was forced into the cavity of the ventricle the auriculo-ventricular valves were seen to float up.

Dr. DE HAVILLAND HALL asked Dr. Brunton how the rhythmical action of the vena cava relieved mitral regurgitation, as it seemed to him that by this means pulmonary congestion was increased?

Mr. GANT asked whether there was a greater liability to the entrance of air into the veins of anæmic subjects than occurs in ordinary cases?

Dr. BROADBENT thought that venous pulsation in itself was not a sign to be relied upon; he had been so accustomed to depend upon the conditions of the veins of the right side that he had not paid sufficient attention to those of the left side. He did not consider venous pulsation as a sign of much value in the diagnosis of tricuspid regurgitation, unless it occurred during inspiration as well as expiration.

Dr. SIBSON in his experiments has used an apparatus similar to the one now shown by Dr. Brunton. He did not consider that any regurgitation only ascertainable by this was of much value, owing to the changes produced by rigor mortis. He thought the plan of removing the auricles and filling the cavity of the ventricles from below an excellent means of demonstrating the action of the valves.

Dr. ROUTH inquired as to the cause of the pulsation in the veins of the neck which occurred during the administration of chloroform.

Dr. BOYD asked whether Dr. Brunton had read the report of the committee appointed many years ago to inquire into the cause of the sounds of the heart.

Dr. SANSOM agreed that the causes of venous pulsations were multifold; he alluded to the pulsation which occurred in the retinal veins. He thought it was probable that after frequent pulsations the muscular coat of the veins became hypertrophied.

Dr. BRUNTON, in reply to Dr. Hall's question, stated that the pulsation of the vena cava prevented the right auricle from being over-distended; similarly, pulsation of the pulmonary veins prevented over-distension of the left auricle. He could not answer Mr Gant, but thought it probable that there might be greater liability in anæmic subjects. He had read an abstract of the report mentioned by Dr. Boyd. Having no data on which to base an opinion, he could not answer Dr. Routh's question satisfactorily.

October 28th, 1878.

Richard Davey, F.R.C.S., Vice-President, in the Chair.

Dr. John Brunton read a paper on—

THE TREATMENT OF NÆVUS BY THE EXTERNAL APPLICATION OF SODIUM ETHYLATE,

and exhibited cases. The author said that he would show his patients first, and then proceed with the further consideration of the subject.

Case 1.—F. S., æt. 7. Had about a week after birth a small red spot, slightly raised, on the cheek midway between the chin and the angle of the jaw. When closely examined it showed a minute superficial network of small red vessels. About the age of four months it had developed into a nævus of the size of a half-crown piece, bluish-red and raised as large as half a walnut shell; this was treated by ligature and needles, but with only very partial success, as the nævus continued to grow rapidly from the circumference. When the sodium ethylate was applied the growth was of the size of a crown piece.

Case 2.—Also a female child; the site of the nævus is over the anterior fontanelle; the extreme size of this nævus was about that of a shilling, bluish-red and considerably raised, and becoming much distended whenever the child cried. In the first case the original nævus yielded in about a couple of months, the continued obliteration of the fresh arrival extended over a space of somewhat about a year.

Sodium ethylate was first obtained and used by Dr. Brunton in 1871, but until last summer he did not know the chemical properties and mode of manufacture of this agent; the method is as follows—viz. Add the metal sodium piece by piece to some absolute alcohol in a wide-mouthed bottle, effervescence will take place; continue to add the sodium cautiously, by lesser and lesser pieces, until all effervescence ceases, and you will find a crystalline substance gradually form at the bottom of the bottle. During the process hydrogen gas is given off freely; the formula of the sodium ethylate is C_2H_5NaO.

On making further inquiries the author found that the credit of bringing into notice this preparation and others of the alcoholic and ethylic series was due to the ingenuity of the fertile brain of Dr. B. W. Richardson, who communicated the following particulars to Dr. Brunton. He says, "When it is brought into contact with water it is decomposed, the sodium becoming oxidised by the oxygen of the water to form sodium hydrate and the hydrogen of the water going to reconstitute the common or ethylic alcohol. The change of ethylic alcohol into sodium alcohol transforms it from an irritant to a caustic. Laid on dry parts of the body the sodium ethylate is comparatively inert, creating no more change than the redness and tingling caused by common alcohol, but so soon as the part to which the substance is applied gives up a little water, the transformation I have described above occurs, caustic soda is produced in contact with the skin in proportion as water is eliminated, and there proceeds a gradual destruction of tissues, which may be so moderated as hardly to be perceptible, or may be so intensified as to act almost like a cutting instrument.

Practical uses of sodium alcohol and potassium alcohol.—I do not as yet see the means of applying readily these two active alcohols for internal administration, but I can predict for them a very extensive application for external purposes ; they are most potent caustics. In some cases they may be employed to destroy rapidly such morbid growths as are not favorable for excision ; in many cases of cancer they will prove invaluable, and will, I believe, exert a direct local curative influence. Injected subcutaneously into morbid growths, they would so quickly destroy them that the action might have to be conducted while the body was under the influence of an anæsthetic. In being applied direct to the sensitive unbroken skin I find that their destructive action is less painful than would be expected. I have made with both compounds a superficial eschar on my arm with no more pain than a slight tingling warmth; what is more, when pain is felt, it may be checked quickly by dropping upon the part a little chloroform which decomposes the alcohol, converting it into a chloride salt and ether of which I have to speak.

Again, I find that these alcohols dissolve some of the vegetable alkaloids; thus, opium may be dissolved in them, and a solution of opium in caustic alcohol is made directly by the mere addition of the narcotic to the caustic spirit.

Practical men will see the advantages of combination of these alcohols with narcotics; the practice opens the way to one of the greatest needs in medicine, a sure, rapid, and painless caustic.

The caustic alcohols may be used in combination with local anæsthesia from cold.

A part rendered quite dead to pain by freezing with ether spray could be directly destroyed by the subcutaneous injection of caustic alcohol, a practice very important in the treatment of poisoned wounds, such as the wounds of the bite of a snake or a rabid dog. It is by no means improbable that some cystic tumours may be cured by the simple subcutaneous injection of a little of these fluids, after destruction of sensibility by cold. Potassium and sodium alcohol added to the volatile hydride of amyl dissolve in the hydride and produce a caustic solution. When this solution is applied to the skin the evaporation of the hydride takes place and a layer of the caustic substance is left behind. This application would prove very useful to the surgeon in many cases of disease."

The author then continuing said that, compared with the action of nitric acid there was but little destruction of the epidermis, and he considered that the sodium ethylate acted as an astringent; as regards the pain produced on application it is by no means sosevere as that caused by nitric acid. The first case points to great advantage in the diminution even to almost absence of scarring.

Dr. **Richardson** after expressing his satisfaction that the remedies he had introduced into practice in 1870 had proved so useful, stated he had treated a small nævus with ethylate of sodium, and afterwards a very large cutaneous nævus which occurred in a patient of Mr. Gay's at the Great Northern Hospital, who was sent to him for treatment. The nævus in this case was on the head, about the size of a half crown, and was very prominent. It had been twice operated on as well as treated with nitric acid, injection of perchloride of iron, and by other means without success. Dr. Richardson applied the ethylate to produce an encrustation of surface, and by lifting up the encrustation and separating the application he completely removed the nævus in a few weeks, leaving a sound and healthy surface as in the cases brought forward by Dr. Brunton. He then referred to the use of the ethylate in cases of scirrhus, and explained the strength of the solution that should be used and the mode of using it, and described their action on the blood and on the crystallisation of the colouring matter of the red corpuscles.

Mr. **Adams**, in speaking of the troublesome character of the cases shown by Dr. Brunton, thought he had never seen a more perfect result from treatment. In his opinion the great objection to the use of the knife is the cicatrix left, and as cicatrices grow, that which may originally have been but a small scar may develop into a very unseemly deformity; he generally adopted some operation of a subcutaneous nature; caustic applications had failed in many cases in which he had tried them; he had never applied a caustic which was so efficacious as the one now exhibited. He asked Dr. Richardson how the ethylate acted? was it by absorbing water or by acting as an astringent? He was opposed to the use of all injections.

Dr. RICHARDSON stated that a chemical change takes place, the ethylate takes up water from the structures, reforming alcohol; the alcohol then coagulates all the albuminous compounds in its neighbourhood; the soda liberated acts as a caustic, but its action is limited by the coagulation caused by the alcohol. There is moreover a further action on the blood-corpuscles, the red ones are disintegrated and transformed into a crystalline state, while the white ones are left unaffected for a time.

In regard to pendent vascular tumours, there is a danger in the application of the ethylate; in one case, a little excess of the ethylate caused too rapid a destruction of the part and was followed by serious hæmorrhage. In these cases it is advisable to dilute the ethylate with alcohol so as to promote coagulation.

Mr. MAUNDER thought this process a more simple one than the others usually employed; he understood that it was only applicable to the cutaneous nævi. In these cases the skin must be destroyed, therefore, such nævi could not be got rid of without cicatrices.

Mr. ROYES BELL had never seen a case with so small a scar; he considered that small subcutaneous nævi do very well when treated by the ligature; he had tried galvano puncture with but little or no success.

Mr. OWEN asked three questions:—1. Will the material act on healthy skin? 2. Will it spread, or is it necessary to protect the surrounding skin by oil, &c? 3. Where can the preparation be obtained?

Dr. BRUNTON, in reply, stated that it has little or no action on the healthy skin, that it limits itself to the spot to which it is applied, and that it can be prepared most simply by adding the metal sodium in small pieces to absolute alcohol.

Dr. RICHARDSON said that the preparation was made for him by Robbins, of Oxford Street.

Mr. **Macdonald McHardy** exhibited a female patient, æt. 63, from whose right eye he had removed a mature senile cataract barely five weeks ago.

The eye, which bore no trace of having been recently operated on, presented a perfectly mobile, circular, central pupil, and with a lens of +11 dioptrics spherical −1 dioptric cylindrical afforded distant vision rather better than one half, whilst it could read No. 1 of Jaeger's test-types at ten inches with +3 dioptrics added to the aforementioned glass.

Mr. McHardy explained that this was the first case in which he had carried out a method of operating for cataract, which he had devised with a view to securing all the advantages of Dr. Bell Taylor's button-hole operation, without the risks necessarily attendant upon the elaborate manipulation by which that most dexterous operator achieved his end.

The author recognised that, whatever tended to simplify an operation without diminishing its usefulness must act to lessen the number of those mishaps which are known to occur during its performance. Hence, he argued, that the fewer tools introduced into an eye the less it was jeopardised, and thus he was led to operate as he had done in the present case and in two subsequent cases, all of which had resulted satisfactorily. The principal section, that practised by Brudenell Carter, and described in his handbook, had in this case been made upwards by transfixion, but the point of the Graefe's knife, immediately after making the primary puncture, on appearing in the anterior chamber, had been directed through the iris and across the posterior chamber of the aqueous humour, so that the lens-capsule was lacerated by the knife before it was directed forward and onward to the counter-puncture, which necessarily included the iris, and preceded completion of the section in the usual manner. As a result of this manipulation of the knife, a horizontal slit was left in the upper portion of the iris, midway between its ciliary and pupillary margin. The next step was to excise from its ciliary attachment that portion of iris above the button hole through which the lens then readily escaped, in response to suitable manipulation with the vulcanite spoon external to the globe. Though the lens was unusually large, the button hole which it traversed was so small and so concealed by an arcus senilis as to be almost indistinguishable.

Mr. McHardy advocated this operation on account of its simplicity, together with the excellent results it had produced. He did not claim that it offered as great facility for evacuating the lens as did Kuchler's and Liebreich's method, but that it avoided the many and serious consequences which too often follow treatment by that rough-and-ready plan.

Mr. Richard Davy then related a case of

UNILATERAL TRISMUS TREATED BY EXCISION OF THE LEFT CONDYLE OF THE INFERIOR MAXILLA.

A woman, æt. 50, was admitted on October 23rd, 1878, with fixity of the left temporo-maxillary articulation. In June, 1877, she had her first lower molar tooth extracted; an abscess formed, burst into the mouth, then stiffening of the jaw ensued. She could not pass a pin between her teeth, and could eat no solid food.

On November 5th the left condyle was excised by a cut at right angles to the axis of the neck of the lower jaw; the patient could then extrude the tongue, and three fingers could be passed into the mouth. On the 20th the wound was healed; patient could eat solid food, was gaining flesh, and speech improved.

Mr. Davy selected excision as an easy operation, and as one unable to result in bony ankylosis, by reason of the natural interposition of the intra-articular fibro-cartilage.

November 4th, 1878.

Leonard Sedgwick, M.D., Vice-President, in the Chair.

Mr. Rogers Harrison showed some impermeable india-rubber film gloves to be used while dissecting, &c. Manufactured by Messrs. Cow, Hill & Co., Cheapside.

Dr. Sullivan then read a paper on

THE PECULIAR MALARIAL FEVER OF CYPRUS.

The author gave a very concise description of his travels through and about the island, of which he spoke in glowing terms, and then entered upon a consideration of the origin of malaria in general.

He next spoke of the nature of the particular form or type of the malarial fever in Cyprus, and instanced some cases that came under his observation and treatment, particularising one where the patient died two hours after he had been seen by him; and finally, after having treated on the diseases with which this form might be confounded and having formed a just diagnosis of the same, he concluded by presenting a very favorable view of the sanitary prospects of the island.

Sir **Joseph Fayrer** said that, in countries which had become depopulated, barren, and unhealthy through misgovernment and the destruction of vegetation, as in Cyprus, fever is sure to make its appearance—the fever is really due to malaria alone being simply one of the effects of malarial poisoning. The fever of Peshawur is different to the fever met with in Bengal, and again, the fever in Bengal differs from that of the Deccan; yet these diseases have never been considered due to other than a common source—malaria. During the last ten or twelve years Burdwan has been almost depopulated by an outbreak of fever, and the cases have been described as typhoid. Sir Joseph Fayrer believes these to be only other manifestations of malaria, and he has again and again insisted that there are a number of cases in which fevers with symptoms exactly resembling those of enteric fever are really due to malaria, and he has pointed out the importance from a sanitary aspect of making this distinction.

Surgeon-Major **Black** insisted upon the actual existence of ground fever, that is to say, fever resulting from emanations from the grounds, as opposed to marsh emanations. These emanations do even arise from the surface of rocks; the fevers thus produced are of a more remittent type than those owing their origin to marsh miasm. In Algeria the troops employed in digging trenches have contracted fever, and the same thing has occurred in our colonies; this is not true intermittent, but remittent fever. In Hong Kong the ground has become healthy since fresh vegetation has covered it. He was of opinion that the fevers of tropical climates may be of a mixed type, that is to say, intermittent may be combined with remittent fever, but that the one did not pass into the other. He did not think that there was a scorbutic taint connected with the Cyprus fever. The poison of malaria may be introduced into the system either through the lungs by the air, or through the stomach by drinking water. All surface water is probably infected, therefore the water used should be rain water, or that obtained from rivers; if from the latter source, the water should be filtered.

The malarial fogs are probably only of a certain height, therefore dwellings should be erected on poles to avoid malaria. The barracks in Singapore are built in this way, perhaps the same thing might be done with advantage in Cyprus.

Dr. **de Havilland Hall** asked Dr. Sullivan, in reference to the second case he recorded, how long the patient had been ill? He also asked for information as to the state of the spleen in Cyprus fever.

Dr. C. T. **Williams** thought that the character of the soil had a considerable influence in the production of malaria; for instance, the soil of the Campagna of Rome is very light and porous, and it very soon absorbs and gives out moisture; this fact he has verified by experiment. One reason for the unhealthiness of the Campagna has been attributed to the fact that some water still finds its way through the unused aqueducts, and is not drained off again.

Dr. **Sullivan**, in reply to Dr. Hall's question, said that the patient who died had had two attacks of fever and was ill fourteen days. Consequently, the third attack found him in so debilitated a condition that a fatal result quickly followed; in the more severe forms of Cyprus fever which begin with the hot stage the liver and stomach are primarily affected, and the spleen is not much enlarged. In the less severe attacks where there is a cold stage the spleen, as in ordinary ague, is greatly increased in size. He only saw two cases of what appeared to be enteric fever. A malarial fever may simulate enteric fever, but the converse does not hold good.

Dr. **Gilbart Smith** showed a specimen of aneurism complicated by empyema.

Dr. **Routh** proposed, and it was carried, that the discussion on this interesting case be postponed until the next meeting, when Dr. Gilbart Smith would be able to enter more fully into the details.

November 11*th*, 1878.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Dr. **Gilbart Smith** then read the notes of a case of

LUNG CHANGE CONSEQUENT ON ANEURISMAL PRESSURE ON THE BRONCHUS.

These specimens were obtained from the body of a female, æt. 33, unmarried, by occupation a charwoman, who was admitted into the Royal Hospital for Diseases of the Chest on September 18th, 1878.

According to her own account she had enjoyed excellent health until four months previously, when, after suffering for some weeks with cough, she was suddenly seized with great difficulty of breathing and prostration, which compelled her to seek admission into the infirmary, where she remained for three months, gradually getting worse. There is no evidence of her ever having suffered from rheumatic fever or syphilis, but her family history points rather to phthisis, as she stated that her father died of a chest affection, and that two sisters have delicate lungs.

When admitted into hospital her condition was as follows:

Present condition.—The patient is a rather emaciated woman, and looks older than her years, of dark complexion, black hair, which is rather thin; pupils equal; fingers slightly clubbed, and her face venous, puffy, and swollen looking; weight 7 st. 11½ lbs. Her feet are not œdematous. She generally lies on her left side, or well propped up; breathing laborious. She complains of pain in the axilla and towards the back on the left side; breathlessness; cough, accompanied by pain in left side, and very scanty, muco-purulent frothy sputa, and sometimes followed by retching and vomiting. There is also loss of strength and wasting, with night sweats and a mental condition of low type. Her appetite is fair. Bowels regular. Tongue dry, red, and rather furry. Catamenia absent four months. Temp.: morning 100·2°; evening 102·4°. Resp. 30; pulse 118. Urine: colour normal, acid, sp. gr. 1010, neither albumen nor sugar present.

Physical signs.—The chest is emaciated and rather œdematous, and the jugular vein of the left side of the neck swollen. At the nipple line the left chest measures one eighth of an inch more than the right. There is some diminution of vocal fremitus over the left side in front, but posteriorly it is not diminished. There is absolute dulness over the whole left side in front from summit to base, and it extends beyond the middle line to the right edge of the sternum.

Over the area of dulness the breath-sounds are entirely absent, but bronchial breathing is heard above the clavicle and posteriorly, close to the spine.

On the right side resonance is good. Respiration is everywhere puerile, with rough breathing and faint crepitation at the base. There is no bell sound heard.

The heart's impulse is feeble, and the apex beats at the ensiform cartilage. When examined in the out-patient's room ten days ago there was a rough grating sound accompanying the heart's action (probably pleuritic), it is now absent. At the base there is heard a rough systolic sound, which, listened to at the right midscapular region, becomes a well-marked murmur.

The abdomen is natural.

The legs are not œdematous ; no enlarged glands, nodes, or other evidence of specific disease.

Treatment.—Quinine, perchloride of iron, iodide of potassium and stimulants.

Believing the case to be one of pleural effusion, the chest was punctured on three separate occasions, and in different parts, twice with hypodermic needles, and once with an aspirator trocar, but all with negative results.

With the exception of the disappearance for a time of the crepitation at the right base, and of the murmur at the back, the physical signs remained the same, but the dyspnœa and prostration gradually increased until her death on November the 3rd suddenly.

At the post-mortem examination ten hours after death, pus was found to exude from the mouth and nostrils. The chest being opened, the pericardium was observed to be pushed over to the median line by the contents of the left pleural cavity, which proved to be a large collection of thinnish pus containing floating lymph. Above the heart an aneurism, evidently of the aorta, passed upwards and towards the right clavicle, adhering to, and causing some slight erosion of, the sternum.

The right lung was somewhat emphysematous throughout, and at the base was œdematous and congested.

The left pleura was much thickened and roughened by lymph-deposit, while its cavity was crossed by numerous bands of toughened lymph.

The left lung was pressed upwards and backwards againt the vertebræ, and, owing to the firm adhesions, was with extreme difficulty removed from the chest, these also prevented a clean dissection of the aneurism.

The pericardium seemed slightly thickened, and contained about five ounces of a straw-coloured fluid.

The heart was, if anything, rather small, and was firmly contracted. A fibrinous clot was seen in the right ventricle, which, with the right auricle, was somewhat dilated. The valves everywhere were normal and competent.

The following is a description of the aneurism, which was larger than a good-sized orange:

A circular area, the size of half a crown, of the posterior wall of the transverse portion of the aorta had given way, yielding to the blood-pressure in every direction. Its floor, dipping downwards from the opening of the sac, lies between the ascending aorta and the superior vena cava, pressing the latter against the right bronchus, whose calibre is somewhat interfered with. Then passing *upwards* it impinges upon, and overlaps, the trachea and left innominate vein; *backwards*, and to the right it pushed towards the right lung, while to the front one of its pouches compressed the root of the innominate artery, forcing it against its neighbour, the left carotid.

On the left, its floor winding round the ascending aorta, adjoins the posterior wall of the pulmonary artery, and interferes with the right pulmonary artery, and then, by another pouch, proceeds downwards in front of the left bronchus, very considerably reducing its calibre and causing ulceration of its lining membranes and cartilages.

Above, on the left side, the aneurism pressing upon the trachea flattens its rings. The left subclavian artery here rises from one of its sacs, whose wall is much thinned as its projects beyond the orifice of the vessel.

On the inner surface of the aorta are seen numerous patches of atheromatous inflammation, while the orifices of the vessels are observed much interfered with by pressure.

The thoracic aorta also exhibits atheromatous patches. The aneurismal wall is very unequal in thickness, and shows attempts at clot-formation in several of its pouches, and is especially thin towards the origin of the left subclavian artery.

The pneumogastric nerves are not interfered with, but the left recurrent is stretched forwards by part of the aneurism as it passes up the trachea, and it is a question whether the pressure backwards of the left bronchus by the sac may not cause some interference with the pulmonary plexus which lies behind.

The right pulmonary artery is greatly compressed; the right bronchus slightly so, while the calibre of the left is materially diminished, and behind this strictured part there is great congestion of the mucous membrane and puriform collection. Thus, the aneurism seems to have seriously impeded the entrance of air to the left lung, the blood-supply of the right lung, and the flow of blood to and from the head and upper extremities.

The left lung is small, hard, and solid, except towards the back of the lower lobe, which is soft to the touch. Both lobes are joined together by pleural adhesion, and an ulcer opening is observed towards the outer and lower margin of the upper lobe, and also a more recent-looking ulceration is seen towards the base of the lower lobe.

On section the bronchi are observed to be loaded with pus, their calibre is increased, and on tracing the left bronchus downwards from its ulcerated surface the mucous membrane is seen to be much congested, while here and there the bronchi are uneven, irregular in size, and dilated, leading to cavities, especially at the borders of the lobes, giving them a cribriform appearance.

A direct communication can be traced from the bronchus towards the above-mentioned ulceration on the surface, and the whole of this lower lobe is composed of irregular cavities formed by the disintegration of the lung tissue surrounding the bronchioles. At the apex and towards the root there is evidently fibroid change in the lung-substance itself. The whole appearance of the lung is altogether unlike that of an ordinary phthisis, but exhibits, to my mind, that chronic train of phenomena resulting from severe pressure upon the bronchus. And here I may say that I look upon the ulcerous openings on the borders of the lobes as marking two separate occurrences of communication between the cavity of the pleura and the bronchi, the upper and older-looking having taken place previous to her removal to the infirmary, and the lower and recent ulceration shortly before death.

I venture to think this case of sufficient interest for this Society, because it presents many pathological and clinical points worthy of the attention of both physician and surgeon. And first, with regard to the pathology, I cannot think that these changes in the great vessels and lung exist independently of each other, but I consider that we have here another of those cases in which pressure on a bronchus has led to well-marked and fatal results. The alteration in the calibre in the chief air-tube at the root leads to bronchial congestion, bronchial secretion, accumulation in the tubes of that secretion, setting up changes spreading from the lining membrane of the bronchi to their walls, and thence invading the alveoli and lung-tissue itself; in fact, starting all the most favorable conditions for the rapid spread of extensive lung-changes. And here arises the question as to what part pressure on the pulmonary plexus takes in these cases.

Sir William Gull, in a paper published by him in 'Guy's Hospital Reports' bearing on this subject, shows that similar results, as seen in this lung, follow paralysis of the bronchi from pressure on the pulmonary plexus, and Dr. Habershon, in the 'Medico-Chirurgical Transactions,' brings instances of pressure on the pneumogastric nerve leading to pneumonia.

So much for the cause of this lung condition, and now as to the *raison d'être* of the aneurism in a woman of thirty-three. Although there is no evidence of syphilis, yet the scanty history we were able to obtain from her leads me to doubt her never having had it, and my friend, Dr. Goodhart, who kindly saw these specimens with me, is of opinion that these atheromatous changes are due to syphilis. The amount of fibroid change in the lung also supports this theory.

I should like to point out that while the pressure of the aneurism interfered with the return of venous blood from the head, this was compensated in a measure by the pressure exerted on the vessels conveying arterial blood thither, and no doubt the woman's mental condition observed was due to this circumstance.

And now with regard to the clinical import of this case. Could we not have diagnosed this aneurism? I think not; the roughness or the first sound at the base, with a heart displaced by pleuritic effusion, was not enough, and the jugular fulness on the left side was thought to result from the lung mischief. The ordinary signs of pressure, pain, throat or œsophageal disturbance were absent, and the anatomical position of the aneurism itself, pressing as it did on so many of its neighbours prevented the symptoms of marked pressure on any one from displaying themselves. Both carotids and both subclavian arteries received a short supply, and the growth evaded the nerves supplying the voice and throat.

And here we may observe why death occurred so soon, as, one lung being comparatively sound would be thought sufficient to carry on respiration until rupture of the aneurism, but not so; the right lung had to contend with an insufficient supply of blood from the heart owing to the pressure on the right pulmonary artery, and this accounts for her rapid prostration and dusky appearance.

Then, again, why did the attempt to draw off the pus fail? I have no doubt that the thickened pleura was pushed forward by the trocar and not pierced, for, from the position of the lung I do not think it possible that the tube entered it, and so prevented the escape, but was not this a happy failure? for had we succeeded in our well-meant endeavours the support to which the aneurism had been for months accustomed being gone, and the lung unable to expand, rupture would have speedily occurred in nature's effort to fill a vacuum unwisely although not unkindly, made, and the marked thinness of the sac-wall close to the left subclavian artery warrants this opinion.

This case, then, shows the effects of mediastinal pressure on the bronchus. The difficulty, and yet the great importance, of early diagnosis of aneurism in cases of pleuritic effusions, and the effects of the presence of such upon the question of tapping the chest and withdrawing the fluid.

I may add that I am much indebted to my friend, Dr. Bland, for the careful and complete notes of this case.

The President, in discussing the difficulty in the diagnosis of aneurism, mentioned the case of Mr. Liston who died from the bursting of an aneurism, and whose real state was only discovered shortly before death. In view of the direct pressure on the root of the lung, he did not think it was necessary in this case to appeal to nerve changes. He thought that too much stress had been laid on syphilis as a factor in the production of aneurism, and that we ought not to fall into the mistake of attributing everything to syphilis.

Dr. **Symes Thompson** was grateful to Dr. Gilbart Smith for bringing forward a case illustrating failure rather than success. It is not unusual for cases of empyema to give rise to symptoms which suggest the suspicion of aneurism, though no aneurism be present, as may be shown by the murmur clearing up after the removal of the fluid; the pressure of mediastinal tumours often causes gangrene and low forms of inflammatory changes in the lung. He asked Dr. Gilbart Smith on what evidence he had based the diagnosis of pneumo-thorax.

Dr. **Douglas Powell** said that, in regard to the dilatation of the bronchial tubes, where there is such evidence of direct pressure on the bronchus, we need not go to the nerves for a cause. In his experience, it has usually happened that the bronchial tubes had been pressed upon. He mentioned a case of aneurism of the aorta which he reported ten years ago, complicated with empyema which eventually pointed; the right radial artery did not pulsate and there was only feeble pulsation in the right carotid. The empyema was incised at the place where it pointed, and as the pus escaped, the radial artery began to pulsate; the man died of hæmorrhage some time after. In cases of pulsating empyemata the differential diagnosis from aneurism is very difficult; distinct laryngeal cough so frequently accompanying thoracic aneurism, was heard by him in a case of empyema. He asked Dr. Gilbart Smith how he had endeavoured to evacuate the fluid.

Dr. de **Havilland Hall** mentioned an instance of the difficulty of diagnosticating between aneurism and pulsating empyema, which occurred in the person of a friend of his. He was seen by several distinguished men, who, however, did not agree; some maintaining that the tumour was aneurismal, others that it was an empyema, and one surgeon went so far as to say that he was prepared to incise it then and there; the gentleman died suddenly, but, unfortunately, a post-mortem examination was not permitted. He asked Dr. Gilbart Smith whether there was any evidence of pus having trickled down the right bronchus, he also asked for information as to the mode of the patient's death.

Mr. **John Astley Bloxam** admitted a patient into Charing Cross Hospital, suffering from aneurism of the transverse part of the arch of the aorta. He suddenly became feverish, the temperature rose to 103°, he frequently shivered, began to lose flesh, and there were evidences of a low form of pneumonia.

Post mortem, the bronchus was found to be blocked up with fœtid mucus.

Dr. **Sansom** thought that in Dr. Gilbart Smith's case, no blame was to be attached to the failure in diagnosis; nevertheless, a fault existed somewhere, and it requires careful thought to endeavour to learn where the failure lay. In a case of phthisis complicated with aneurism, he had considerable difficulty in making a diagnosis. He asked Dr. Gilbart Smith was there at no period a localised pain where the sternum was eroded? He could hardly conceive that such pressure as there must have been, could have existed without some evidence of interference with the circulation. Was the larynx examined in view of the extreme frequency with which paresis of one of the vocal cords, but especially the left, occurs? was the sphygmograph used? If not due to syphilis, what was the cause? The patient was a woman of thirty-three, and had no other evidence of senile change. He had seen much of fibroid thickening about the bronchi in syphilitic patients; he would, consequently, believe that the disease was of syphilitic origin.

Mr. **Maunder** said that it was pretty well decided that one could not diagnose intra-thoracic aneurism in the absence of signs of pressure. He should look upon the aneurism as being of syphilitic origin; he mentioned a case of a young man, aged nineteen, suffering from secondary symptoms, who had an aneurism of the popliteal, which gave way, and his thigh was amputated. While confined to bed, two aneurisms formed in the carotid. He did not approve of physicians tapping the chest. On introducing the trochar, a little twist will enable it to pierce the thickened pleura.

Dr. **Drysdale** asked whether a careful examination of the body had been made, to see if there were any other evidences of syphilis.

Dr. **Symes Thompson** asked Dr. Gilbart Smith if he had any suggestion to offer to account for the presence of well-marked vocal fremitus.

Dr. **Gilbart Smith**, in reply, stated that when the woman applied in the out-patient room, there were signs of the existence of air in the pleural cavity. The chest was punctured three times, twice with the ordinary morphia syringe, and once with the aspirator. Pus did not exude until somewhile after death, and there was no evidence of pus in the right lung. The mode of death was by syncope. There was no pain except over the side of the chest and back. There was a rough systolic sound at the base, but no other abnormal sound. No laryngoscopic examination was made on account of the weakness of the patient. Both the innominate and left subclavian veins were pressed upon. In his opinion the woman had syphilis, but the glands were examined carefully both before and after death, but nothing abnormal was discovered in them; there were no nodes or ulcerations. He agreed with Mr. Maunder, that physicians should not have recourse to surgical treatment.

November 18*th*, 1878.

ERASMUS WILSON, F.R.C.S., F.R.S., President, in the Chair.

Dr. DOUGLAS POWELL showed his schema of the chest,* by the aid of which he described how far elasticity is concerned in healthy and in certain morbid chest conditions. He maintained that thoracic elasticity was (1) an inspiratory force, acting throughout calm breathing; (2) a cause of enlargement of lungs from emphysema; (3) a safeguard against compression of lungs, during enlargement of lungs from emphysema or pneumonia, and in moderate effusions. Lung elasticity was, on the contrary, an expiratory force, an aid to the return of the blood to the heart, a cause of cardiac displacement in pleuritic effusion, and an obstruction to the removal of such effusion by paracentesis.

Dr. R. J. LEE spoke of the great care and labour Dr. Powell had bestowed on the working out of the details of his apparatus, and of the value of the theory he brought forward. Keeping up a permanent opening in the thoracic wall in a case of empyema was contrary to sound physiological doctrine, and he (Dr. Lee) had had an apparatus constructed for the treatment of empyemata, which prevented the formation of the opening.

Mr. OWEN then read a paper on

THE APPLICATION OF RIGID JACKETS IN THE TREATMENT OF ANGULAR CURVATURE OF THE SPINE.†

He remarked that we owed to Dr. Sayre a debt of gratitude for having introduced into our practice an apparatus which was both light and inexpensive, and which, when once applied, might be left on for months, securing absolute and uninterrupted rest for the carious vertebræ. Thus, we were enabled to treat Pott's disease on the same principles which we should apply to an inflamed hip-joint, or to a carious tarsus. He mentioned that Sayre, in the preface of his book, suggested that one advantage of the plaster-of-Paris treatment was that, by its means, the general practitioner was able to keep the patient under his own supervision. This was, indeed, a great matter, especially to the country doctor, who no longer was compelled to jolt a sufferer by rail or road to a specialist in the nearest town; nor was he obliged to call in the aid of any member of that somewhat anomalous class who style themselves "surgical mechanicians." Dr. Sayre had also remarked that the great object in the treatment was maintenance of rest of the affected parts without precluding fresh air, sunlight, and change of scene. Thus simplicity and rest were the words which, according to the author of the book, characterised the method. Mr. Owen regretted that, further on, Sayre had talked about stretching a spine weakened by caries, and so diminishing the angular projection. He thought that the theory was highly problematical, and that the bringing in of this matter was quite unnecessary. A considerable experience in the treatment of caries of the spine, obtained at the Children's Hospital and elsewhere, had induced Mr. Owen to reject entirely Sayre's theory, though he placed implicit faith in the working of his method with certain modifications. He thought that if the spine was weakened from disease, it was quite possible for the surgeon to fracture it in any attempt to straighten it; bone-setters, for instance, had accomplished this feat. The idea of hanging a terrified little subject of cervical caries by the arms and head was, to say the least, unpleasant. For some time he had entirely given up suspending patients, with the result of finding the process shorn of many of its objections, but of none of its value. The arms being held up out of the way, he applied the plaster bandage as the child stood in front of the fire. He thought that no rigid jacket could do more than play the part of a perfect splint to the child's trunk and by its support obviate the necessity of the child bending forward to rest his elbows upon the table, or his hands above his knees. He regarded any attempt at straightening the diseased angle as undesirable, because its attainment was doubtful.

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* This paper has been published *in extenso*. See 'British Medical Journal,' Dec. 7th, 1878.

† This paper is published in full in the 'Medical Press and Circular,' Dec. 18th, 1878.

In conclusion, he trusted that he should not be considered as having criticised Dr. Sayre's views unfairly; experience had led him to regard Dr. Sayre's treatment as of the greatest therapeutic value, and he was of opinion that the thorough scepticism with which he received Sayre's theory did not preclude a sincere belief in the merit of his work.

Mr. **Walker** said that he had practised this treatment for the last sixteen years. He had a patient under his charge for curvature of the spine and he sent the child up to London, where it was completely encased in a gutta-percha case preparatory to further treatment; this gave him a hint as to the efficacy of rigid jackets. He had read a paper before a branch of the British Medical Association two years later on the subject, but, further than doing this, he had not published his treatment. He, however, wrote to the 'Lancet' when he heard of Dr. Sayre's plan, and detailed his own method. Suspension is not a necessary part of the treatment, and so far he agreed with Mr. Owen, but at the same time he thought it necessary to put the spine in the most favorable position for cure. The spine is not a rigid column, but jointed so that the portion below the seat of the disease is thrust backward as the upper part falls forward. Dr. Sayre says he only extends the patient until pain is relieved; this Dr. Walker does by placing the patient in the recumbent position. The first patient on whom he tried suspension fainted, though she had previously been put up in the recumbent position. Patients gain in length, even in the recumbent position. His method of applying the rigid jacket is as follows, the chief point to be noticed being the use of the many-tailed bandage. The bandage made of Victoria gauze is saturated with the liquid plaster of Paris, and cut into pieces sufficiently long to encompass the thorax, each piece overlapping the other to the extent of two thirds. A second layer of bandages is placed over this and the patient, encased in Sayre's knitted jacket, is then placed in the recumbent position on the bandages, each piece of which is then carefully brought forward to the median line, so that eventually the patient has a complete casing of six layers thick of these bandages, and, owing to the overlapping there is extra strength; occasionally nine layers may be necessary. Dr. Walker showed an ingenious instrument which he uses for the purpose of smearing the bandages with the plaster; the ordinary plaster would set too soon; he therefore makes one of the following mixture:—1 lb. of plaster of Paris, 8 oz. of water, 1 oz. mucilage of acacia (B. P.); five times this quantity is usually sufficient.

One of the great advantages of this plan is, that it can be used anywhere, and requires no apparatus.

Mr. **Barwell** asked which gave the greater traction on the diseased structures—lying down or suspension? He had found that suspension was difficult to manage with Sayre's apparatus. He suspends entirely from the chest, the loops he uses passing transversely across the chest, pressure being thus directed against the second rib. The patient is placed on a high stool and only partially suspended; during the operation he is perfectly at ease and able to chat. He would strongly condemn the apparatus in which suspension is effected by the head, the hands grasping a pole. He had no idea that Dr. Walker ever used plaster of Paris; the plan suggested by that gentleman he considered most ingenious, and most excellent.

Mr. **Durham** proposed, and Mr. **Coles** seconded, and it was carried, That the meeting be adjourned until Monday next, November 25th, when the discussion on Mr. Owen's paper be continued.

November 25th, 1878.

Richard Davy, F.R.C.S., Vice-President, in the Chair.

The discussion on Mr. Owen's paper on the

USE OF RIGID JACKETS IN THE TREATMENT OF DISEASES OF THE SPINE

was opened by

Mr. **Fisher**, who exhibited specimens of the poro-plastic jacket, the invention of Mr. Cocking, as made by Mr. Ernst. The mode of application is as follows:—The jacket is first softened in a chamber heated up to a temperature of 150° F.; or, if the chamber be not available, in hot water of the same temperature. The patient is protected with a wet cloth or cotton wool, and the jacket is moulded to the form of the chest from below upwards. In the first case in which he applied the plaster of Paris an abscess was found in the lumbar region; the felt jacket was then used with the best result. What

Mr. Fisher claimed for the poro-plastic jacket was not superiority to, but equality with, the plaster-of-Paris jacket. The advantages of the poro-plastic jacket may be summed up as follows:—(1) Great facility of application, the manipulation only lasting two minutes; (2) durability of material, the jacket will last over six months; (3) the accuracy with which it can be fitted; (4) the certainty with which it becomes hard, unlike the plaster of Paris, which sometimes does not set; (5) its lightness; (6) the ease with which it can be removed for the sake of cleanliness or examination. He maintained that the vertebral joints are very different from other joints, inasmuch as they have no synovial membranes, and are comparatively free from nerves. Mr. Fisher suspends from the head when possible, but not heavy adults, or children with cervical diseases high up. The suspension should be done slowly and carefully, just sufficient to raise the patient's heels from the ground. He advised that the old name of Pott's disease of the spine should be still retained.

Mr. Adams spoke of the great economy and efficiency of the poro-plastic jacket. He thought that Dr. Sayre had made an error in expressing himself, and that he did not intend to straighten out the angle caused by the disease, all he meant was to remove the compensatory curve by suspension. The patients should be told that it would be necessary to wear some sort of support to the age of twenty. The poro-plastic jacket removes some of the complaints made against the plaster-of-Paris apparatus, as it can be removed at night and allows the patient to be washed. Mr. Adams has used gutta-percha supports for more than twenty-five years. Steel supports have done good service, and some of the lighter forms are still most useful; he thought that the poro-plastic jackets would supersede the plaster-of-Paris jackets.

Mr. Golding Bird spoke from the experience of some fifty or sixty cases, half of which were angular; he preferred plaster of Paris to felt, one reason for his preference being that, as the splint is cut up the middle, you do not get the complete rest it is so desirable to obtain. The objections that have been raised to suspension are somewhat as follows:—(1) If the patient is a child he is frightened, or if an adult may faint; (2) you cannot show a cured case of Pott's disease where the vertebræ have not come together; therefore, in the deformity is the cure effected. This is only to be expected, as you cannot show in any museum a spine which has been so treated as to have a chance of healing without the surfaces coming together. (3)

You rudely tear asunder the spine which is united; Mr. Bird would reply to this, that so long as the patient suffers no pain you can do no harm. (4) Can anything be gained by extension of the diseased part? In answer to this question, the effect of extension upon a fractured femur which had become bowed was adduced.

Mr. Bird maintained that the boss is influenced if the patient be fairly suspended; to prove this, he showed two tracings of the spinal column, in the first the boss had gone down, in the second the secondary and primary curves were both gone, and the boss less; he would not be content to put the patient up after Mr. Barwell's method, unless the curvature were low down.

Dr. **Dick** mentioned a case of spinal disease in which the patient was a corpse in ten minutes. Suspension in a case like this would be dangerous. Jackets called cuirasses had been in use thirty years or more. To all kinds of jackets two objections can be raised. (1) If put on too tightly the patient cannot bear them; (2) if put on too loosely the body slips down in them. Moreover, they are contrary to the laws of mechanics, as no *point d'appui* can be obtained against the soft abdominal walls.

Mr. **Howard Marsh** had no doubt but that the curvature could be straightened out. He could not conceive why anchylosis should not go on if the spine were kept straight. You can do very little for curvature in the lumbar region, as you can get no good *point d'appui* below in front. He was inclined to prefer the felt jacket to plaster. Sayre's apparatus must be renewed every three or four months, and if this is to be done by a medical man the apparatus could hardly be called a cheap one. Dr. Taylor, of New York, insists on the importance of the early recognition in these cases; it, therefore, behoves us to make a diagnosis as soon as possible, so as to forestall the disease.

Mr. **Donald Napier** stated that over fifty cases had been put up by means of Maw's apparatus, a specimen of which could be seen in the adjoining room. He asked whether Sayre's system and rest might not be combined; the patient to be placed on an inclined plane, and extension made from the lower extremities and shoulders? He also asked whether the respiratory and digestive organs were not liable to be interfered with by these rigid jackets.

Mr. **Durham** doubted whether anything so good had been done for years, as the plan brought forward by Dr. Sayre.

It is scientific in principle, being the same kind of practice with which we treat fractures and diseased joints elsewhere; the spine is put in the best possible position, and is then fixed in that position without interfering with the patient's comfort. Dr. Sayre does not exercise any violence, he does not advocate breaking down adhesions. Extension is made by him in the gentlest possible way, just sufficient to relieve the patient of pain. Extend as far as you can without causing pain, and put the part into as good a position as possible; recorrect and recorrect as occasion offers. If the patient is kept lying down, every one knows how flexible the spine is, and how readily influenced by muscular movement, so that the good it has taken months to do may be undone in minutes. The treatment would be repudiated in any other diseased joint. Children are hung up by the score at Guy's, and no harm has resulted; and that there is a liability to a fatal accident through carelessness, should not prevent any one, capable of exercising moderate care, from employing suspension. He pointed out the ease with which Sayre's system can be carried out, and how impossible it is, in the greater number of cases, to carry out the treatment by recumbency, especially in poor practice, and how difficult it was to get an instrument upon the old system to fit, now Sayre's plan is carried out by the dressers at Guy's, under supervision, and these dressers are the future general practitioners. Lastly, this practice is not merely scientific, easy of application, and less expensive, but eminently successful in practice. In no case whatever of genuine disease of the spine had he seen the slightest sign of ill effect, but in all, good, more or less, and in most, more rather than less, was the result. The first case put up by Dr. Sayre himself, at Guy's, came quite bowed, but is now quite upright, a strong and healthy child, a great contrast to the miserable object she was. Each case must be treated on its own merits; from time to time cases will be met with in which the application will be difficult, as in an instance he had at present under treatment. The child is an utter idiot and it is quite impossible to keep her quiet; the only way to treat this patient will be to lay her down, give her ether, and then extend.

Mr. Coles spoke from the experience, with Dr. Sayre in New York, of six months, observing both his hospital and private cases.

No harm can be done, provided extension is stopped as soon as pain is produced. Dr. Sayre had tried slitting up the bandages in front, but had given up this plan.

Dr. R. J. Lee said, from a mathematical point of view, the question under discussion resolves itself into a problem of this sort: By what means can we encase a number of bodies with independent mobility, so as to afford a rigid support?

At this point, on the motion of Dr. R. J. **Lee**, seconded by Mr. **Napier**, the meeting was prolonged for half an hour.

Mr. **Adams** spoke of the relative expense of the two plans of treatment. The felt jackets cost ten shillings, fifteen shillings, and the superior quality thirty shillings each, and they lasted from one and a half to two years; the plaster-of-Paris jackets cost from seven to eight shillings each, and required to be renewed every two months.

Mr. **Davy** remarked that a good idea lies dormant for many years, is reproduced, and the English surgeons run after it.

Ambrose Paré, in 1545, had described a plan very similar to that of Sayre, with the exception of suspension, though he mentioned the necessity of extension. Any one who has had to treat for spinal curvature will know that the recumbent position is simply impossible either for rich or for poor. Hospital surgeons formerly saw very little of spinal disease, as the cases were relegated to surgical mechanicians. In Mr. Davy's opinion Dr. Sayre was the most accomplished mechanician he had ever met. He had not by any means found that plaster of Paris was applicable in all manner of cases; where there is discharge it is impracticable. In reference to suspension, great anxiety was expressed by the patients at the idea of being hung. To obviate this, Mr. Davy suggested a combination of slinging in the hammock with suspension.

Mr. **Edmund Owen**, in reply, said that he thought the Society was greatly indebted to Dr. Walker, of Peterborough, for the attractive way in which he had opened the discussion at the last meeting, with the description of his method of applying the plaster-of-Paris jacket, the patient being in the recumbent position. He was glad to find that Dr. Walker did not accept Dr. Sayre's theory about straightening the carious angle. The curvatures which were probably affected during suspension were those which were produced as secondary to the diseased angle. In reply to Mr. Barwell's remarks, Mr. Owen suggested that as Mr. Barwell had ceased to suspend the patient, when the disease was in the cervical or upper dorsal regions, he should discard suspension altogether; the apparatus shown for suspension from beneath the armpits looked very practicable however. Mr. Davy was quite right in saying that constant recumbency in the treatment of the disease was unattainable. The plaster-of-

Paris jacket was a great accessory in the treatment, as it insured absolute rest to the patient during treatment. To Mr. Fisher he remarked that one great advantage that the plaster-of-Paris jacket possessed over the porous felt, was that when once on it remained on for two, three, or more months, and this uninterrupted rest was a great matter. Moreover, the plaster could be applied by any one, whilst for using the other material the aid of a specialist was required. The plaster was also much cheaper. Mr. Adams had suggested that Dr Sayre did not really make out that he straightened the diseased angle, but Mr. Owen could put no other interpretation on his words, but he was glad to hear Mr. Adams say that he did not himself believe in the straightening of the angle. That which was required was, as Mr. Adams had shown, a rigid support, and the more continuous its action the better. On this also Mr. Golding Bird had insisted, but as regards the suspension Mr. Owen could assure him that patients did as well without it as with it, that the angle became less prominent on the jackets being removed after using them for two or three months.

The children at the Great Ormond Street Hospital did not seem to be quite so ready to submit to suspension as they appeared to be at Guy's, judging from Mr. Bird's and Mr. Durham's account. Of the patients Mr. Owen had brought before the Society that evening eight had had their jackets applied without suspension, and one of them the smallest boy, who could not walk before, could now run about. In answer to Dr. Dick's remark, the supports should be obtained from the whole pelvic surface, not from points of bone.

To Mr. Marsh Mr. Owen replied that the very fact of the transverse and articular processes being fused together in advanced disease seemed to indicate that rigidity, not unbending, should be sought; if the disease were in the lumbar region of the column, the case ought to promise a good result. Experiences did not bear out Mr. Napier's theoretical remarks objecting to the interference given to the processes of respiration and digestion.

In answer to Mr. Durham, Mr. Owen said that he gave the greatest credit to Dr. Sayre; indeed he was a sincere believer in his work, though at the same time experience had not led him to accept his theory. The principle was right, the spine should be treated with absolute and continuous rest, like a limb that was broken. The meeting then adjourned. The jackets on the patients shown by Mr. Fisher were made by Mr. Ernst.

Messrs Arnold showed specimens of poro-plastic felt, made up into jackets and knee-caps; and Messrs. Maw, Son and Thompson also exhibited their apparatus for suspension after Dr. Sayre's method.

December 2nd, 1878.

ERASMUS WILSON, F.R.C.S., F.R.S., President, in the Chair.

Dr. LEARED read a paper on a

NEGLECTED PROXIMATE CAUSE OF DYSPEPSIA.*

He pointed out that all varieties of dyspepsia were referable to two divisions, atonic and those depending on gastritis. The cause of the symptoms of functional dyspepsia being retarded conversion of food into chyme. There is a large class of cases in which digestible food, even in moderate quantity, is not digested with ease, and yet in spite of much daily discomfort the general health is hardly affected. The food is digested slowly, but eventually there is no loss of flesh or strength; the appetite is unimpaired and the defect cannot lie in the gastric juice.

In by far the larger number of dyspeptic cases the lesion is not one of secretion, but of the proper movements of the stomach which aid solution of food, just as agitation of a glass containing water and crystals of a soluble salt will hasten the solution of the salts, so the attrition of the masses of food on one another by the action of the muscles of the stomach aids their digestion.

Dr. Leared then described the arrangement of the muscular fibres of the stomach and their action. In ordinary cases, whenever the contractile movements of the stomach are lessened, flatulent distension follows, due to lodgement of food in the lowest parts of the stomach and its fermentation there, and the distension of the viscus with the gases evolved. Flatulence, so common a symptom in such cases, acts harmfully by stretching the muscular fibres and impairing their tonicity, Dr. Leared therefore suggests that dyspepsia should be divided not into atonic and inflammatory, but into "dyspepsia from impaired motion," and "dyspepsia from defective secretion." In the former, uneasiness after meals, flatulence and constipation are marked symptoms; in the latter, pains of sharp, shooting, dull, or dragging character predominate, the above symptoms being far less prominent or even absent, indeed, from imperfect digestion of food in the cases due to deficient secretion, diarrhœa may be set up by irritation of the intestines by undigested food. As to treatment, regulated diet was the chief measure, the principal meal to be taken early in the day before the nervous system has been exhausted by mental or bodily exertion. Strychnia in the form of tincture of nux vomica is the most valuable drug for this condition and should be administered freely. Although Chomel's condemnation of the drug had been endorsed by Dr. Brinton, strychnia has held its place as a remedy for dyspepsia. It should not be prescribed in pills because of the difficulty of its exact subdivision, and the tendency of the alkaloids to precipitation by alkalies should be borne in mind; a dose of one twentieth of a grain given three times a day should be rarely exceeded. The cases suitable for its employment required selection. Faradization was not of much service, charcoal is of no use in extreme flatulence for absorbing the excess of gas.

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* This paper has been published *in extenso*. See 'British Medical Journal,' April 29th and May 3rd, 1879.

The PRESIDENT inquired as to the time at which Dr. Leared would administer strychnine in cases of flatulent dyspepsia; he thought that exception should not be taken to the use of this drug on account of its powerful action; it is not many years since those who prescribed arsenic were held up to reprobation; for his part he considered it a perfectly harmless drug when properly administered.

Dr. THEODORE WILLIAMS used strychnine largely in dyspepsia, and with fair results; but he would hardly go so far as Dr. Leared in saying that it was THE drug for flatulent dyspepsia; other things are to be considered, as, for instance, the diet. He would cut off sugar, starchy substances, and beer. There is another set of dyspeptic cases, even more difficult to treat—those met with in atonic females who suffer from the accumulation of fluid in the stomach; this disease has been well described by Professor Kussmaul. Dr. Williams would be inclined to treat these cases by nutritive enemata, so as to give the stomach functional rest.

Dr. THOROWGOOD agreed with Dr. Williams as to the importance of diet. In flatulent dyspepsia, oppression, due to over-distension rather than pain, was complained of; patients suffering from this variety of the disease should have a concentrated form of nourishment, more meat and less farinaceous food; in the irritative variety the treatment should be the reverse. He mentioned a case, recorded by Chomel, in which the patient, by pressure on the stomach, could force up fluid into the mouth. Patients suffering from accumulation of fluid in the stomach, should be treated with dry food, medicines have no effect.

Dr. **John Brunton** found great advantage resulting from the use of the remedy, strychnia, which Dr. Leared had so highly praised. The great majority of patients suffer from making their stomach do what their teeth ought to have done, and chronic dyspepsia is the result.

Dr. **Crichton Browne** thought Dr. Leared's paper hardly took a sufficiently broad view of the subject. He would not be prepared to limit dyspepsia simply to impaired action of the muscular coat of the stomach, as there might be excessive action or irregular action, as an hour-glass construction of the stomach. Again, the secretion besides being deficient in quantity, might be altered in quality. Strychnia, in addition to acting on the muscular coat, undoubtedly increased the secretions.

Dr. **Fothergill** spoke of the dyspepsia associated with heart disease and due to the interference with the circulation through the stomach. The great bulk of the dyspepsia of women is a reflex form associated with menorrhagia, and an irritable condition of the ovaries, and he alluded to the vomiting of early pregnancy as an allied condition; he treats these cases by applying a blister to the tender ovary, obtaining free action of the bowels by sulphate of magnesia, and quieting the nervous system by bromide of potassium, this mode of treatment has succeeded when other measures had failed.

Dr. **Cook** advocated the use of iron in dyspepsia.

Dr. **de Havilland Hall** asked Dr. Leared whether the constant current would not be of more use than the interrupted.

Dr. **Leared** in reply stated that he gave strychnia in doses of one twentieth of a grain on an empty stomach, half an hour before meals, three times a day, and often combined it with iron; he remarked that the discussion had wandered from the point to which he wished to draw attention, viz., the relaxed condition of the walls of the stomach. He thought that diet was of the utmost importance, but that in the other form of gastritis diet was even more important; he quite agreed with Dr. Fothergill as to the occurrence of sympathetic dyspepsia; he thought the constant current of doubtful value. The meeting then adjourned.

December 9*th*, 1878.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Dr. Tilbury Fox read a paper and exhibited specimens under the microscope, illustrating the following skin diseases, viz.

THE HISTOLOGY OF PSORIASIS, DYSIDROSIS, MOLLUSCUM CONTAGIOSUM, AND DISSEMINATED FOLLICULAR LUPUS.

He prefaced his remarks on the specimens by saying that the demonstration was particularly appropriate before that Society, on whose work the illustrious Willan had shed such brightness, and more so while the President's chair was graced by the occupancy of Professor Wilson, who had laboured so honorably for half a century in the cause of dermatology in England. In the year 1873 Dr. Fox gave certain reasons in the third edition of his larger work on skin diseases why he considered the psoriasis ought not to be regarded as an inflammatory hyperæmia, or rather that the overgrowth of the rete and cuticular cells was not consequent upon an inflammatory hyperæmia, but that it was in all probability primarily an hypertrophy of the rete. He wrote thus: " I am constrained to believe that the disease consists primarily and essentially in a misbehaviour of the cell elements themselves, a perversion of the ordinary cell-life of the epidermis. A true tissue disease in which the trophic nerves probably play the chief part " (p. 265, third edition). The chief reason for the adoption of this view was the observation that the amount of cell hyperplasia and degree of hyperæmia, bore no relation one to the other, and that with very little hyperæmia there might be very little cell growth and *vice versâ*. There is a tendency, however, to be carefully guarded against, for it must be remembered that qualitative blood-states, such as gout and struma, greatly modify and influence psoriasis. Whilst Dr. Fox and his brother have been accumulating evidence, Dr. Robinson, of New York, has recently written an excellent paper detailing the results of his microscopical research. As specimens of psoriasis had not been, to Dr. Fox's knowledge, shown in England, he took this opportunity to demonstrate the disease, and to state that he almost entirely agreed with the correctness of Dr. Robinson's histological facts. The commonly received opinion is that psoriasis is an inflammatory disease in circumscribed spots of the papillæ, and of the upper layer of the corium which is accompanied with excessive cell production in the rete. This view, however, is incorrect, for the disease consists in a primary activity and hyperplasia of the rete cells with a hyperæmia of the papillary layer, as a secondary consequence. Dr. Robinson claims to have demonstrated psoriasis at a very early stage: "When there is actual hyperplasia of the Malpighian layer, and before round cells are formed outside the blood-vessels." At a later stage, psoriasis specimens simply show in different degrees the activity of the rete layer of cells, and the hyperæmia of the papillary layer from the blood-vessels of which numerous leucocytes have escaped to crowd the papillæ and upper part of the cutis. The hyperæmia is not truly inflammatory, but a psoriasis may become inflamed as a secondary condition. It was pointed out that this tendency of certain tissues to take on hyperplasic growth was very interesting, especially in relation to the origin of cancer.

Dysidrosis.—Dr. Tilbury Fox remarked that he first described this affection in 1873, although he had been acquainted with the condition for some years previously and had frequently directed the attention of his class to it. Dr. Fox showed the drawing from which the plate in his edition of Willan and Bateman's Atlas was lithographed, and pointed out the chief clinical features of the disease; thus the subjects of it are of a peculiar temperament, viz. possessing a weak nerve tone, and having a tendency to perspire frequently and copiously; both in winter and summer they are pallid and debilitated. Dysidrosis attacks adults. The seat of attack is very characteristic and peculiar, viz. the palms of the hands, and palmary surface and sides of the fingers, and often corresponding sites on the feet. It is not a febrile disease, but the hands get exceedingly hot and painful; the patients generally raise them against the chest, where they hold them in a very characteristic manner. Very frequently the vesicular affection is complicated with miliaria of the general surface. It runs a pretty regular course of from ten to thirty days and tends to recur. If the little sago-grain-like vesicles be examined with a lens in the earliest stage, they are seen to be remarkably situated in the sites of the openings of the sweat ducts, and when the contents are examined at this stage they are found, though later alkaline, to be acid. This striking combination of clinical characters convinced Dr. Fox that the disease was one primarily connected with the sweat apparatus. The vesicles become larger and confluent, and eventually may form loculated peculiar bullæ. The skin macerates and peels off, exposing a reddened surface which is essentially non-discharging, a further clinical fact of importance in distinguishing it from eczema. Dr. Fox then explained the morbid anatomy of the specimens he had exhibited. Dr. Crocker and himself removed a portion of skin affected with dysidrosis of three days' standing. It is almost useless to examine any but those in the earliest stage, as the enlarging vesicles displace the tissues so much as to confound the natural relation of the parts. The specimens disclosed a dilatation of the sweat ducts, swelling and granulation of the lining epithelium of the ducts and glands, so that the lumen of the coiled portion is blocked. There is an absence of the excessive dermic congestion found in eczema, and what is present is mostly limited to the neighbourhood of the sweat apparatus. The commencing vesicles are found in the rete over the interpapillary portion, in the line, in fact, of the course of the sweat ducts. Moreover, the sweat ducts are actually demonstrated entering the vesicles, and in rare cases, leaving, though the direction of the sweat duct as it comes to the coiled portion leaves little doubt in many cases of the direct connection. The papillæ are not notably hyperæmic, nor do the early vesicles lie over the engorged vesicles of the papillæ; only two diseases could possibly be confounded with it, viz. pemphigus and eczema. The manifest composition of the bullæ from confluent vesicles, the localisation of the disease to the hands and feet throughout, and the peculiar course of the disease, not to mention many other points, all negative the idea of a pemphigus; though a remote element is certainly present, that this disease differs from eczema has been already shown.

MOLLUSCUM CONTAGIOSUM of Bateman. *Molluscum adenosum.*—Dr. Tilbury Fox said that this disease was originally described by Bateman as a peculiar variety of what is now known as fibroma, but Bateman was not aware of the sebaceous origin of these tumours. The latter point was completely demonstrated by Professor Henderson, in the forty-sixth volume of the 'Edinburgh Medical Journal,' and the glandular origin of molluscum adenosum has been held in

England since that time. The disease was some time later recognised in France, and the English view has been fully adopted; but in Germany, where the disease has only lately been, and even now is imperfectly, recognised, several recent observers have taken a different view. Thus, Virchow, though considering it as originating from the sebaceous glands and hair, calls it an epithelioma molluscum; and quite recently, several observers have asserted that the disease is occasioned by an overgrowth downwards of the rete mucosum, with obliteration of the papillæ, so as to very closely simulate a gland. The contents of the tumour, they say, are due to the rapid overgrowth of the central rete cells and their subsequent bursting through the cuticle, and discharge. Dr. Tilbury Fox had examined many cases and tumours from all parts of the body, and evidence seemed conclusive as to the glandular origin of the disease (a gland in a very early stage of hyperplasia was shown, and also tumours, to display their glandular nature and non-implication of the rete). In one case, where one of thirty tumours was removed from the scalp of a middle-aged man, the origin of the rete was certainly simulated, but the somewhat peculiar appearance of the tumour, both to the naked eye and under the microscope, showed that the exceptional situation of the tumours had caused them to be flattened out, so that they looked like miniature soup plates imbedded in the skin. The clinical and microscopical evidence accumulated by Henderson, Fagge, Duckworth, Wilson, Hutchinson, &c., was conclusive, and the drawings shown were held to prove that the gland structure was far too characteristic to be due to a rete growth. The further interesting point demonstrated was the formation of the "mollusc bodies," about which so much has been written. In each acinus the column or bordering cells are seen and immediately within them a layer of rapidly multiplying cells. These latter become variolated and the varioles become filled with oily matter, and so the cells are immensely distended to form the so-called *mollusc bodies.* In fact, the whole of the diseased process consists in an hypertrophy of the gland, and a corresponding exaggeration of the secretory-cell changes within. No causal agent in the contagion has been made out in any of the tumours examined.

Disseminated follicular lupus.—Dr. Tilbury Fox said he had published a clinical lecture on this condition recently in the 'Lancet,' and he now availed himself of the opportunity to show two water-colour sketches of the disease, and to exhibit the microscopic specimens which were in his possession, and which Dr. Crocker kindly assisted in making. At first sight the disease looked like an acne, but there were also some peculiar clinical characteristics. The spots when once formed remained for years as dull-red gelatinous, indolent, acne-like patches, and if they disappeared atrophic changes ensued. No ordinary acne treatment did any good, and many doctors had tried their hands on the cases without effect. Caustics alone cured the spots.

The disease occurred in young phthisical subjects. The microscope showed a small celled growth round the sebaceous gland and hairs. If observers objected to the name, he added that the term acneiform lupus was already appropriated, and he particularly wished to call attention to this rare condition, in order that appropriate treatment might be followed.

Dr. THIN said he had had, by Dr. Fox's kindness, an opportunity privately of studying the microscopical preparations which that gentleman considered were affected with a disease of the sweat glands, and he was reluctantly forced to the conclusion that they afforded no evidence that the sweat glands had anything to do with the affection. He found cavities of varying size in the rete mucosum, containing pus cells and granular matter exactly similar in every respect to cavities he had found in similar situations in ringworm and other diseases of the skin attended with irritation. He found also the lower cells of the rete separated from each other, and at the same points its lower border separated from the papillary layer by effusion from the blood-vessels. He could find no evidence that these changes took their origin in the duct of the sweat-glands, although the cavities as they enlarged occasionally ruptured a duct and caused an illusory appearance of a communication with the lumen of the duct. There was no evidence of an affection of the sweat-coil, nor did he consider that the blood-vessels in connection with it were enlarged as had been described. Dr. Fox's description of the microscopic appearances in psoriasis were, he believed, borne out by the preparations. The name "follicular lupus," introduced by Dr. Fox, was, Dr. Thin believed, misleading and unjustified. The coloured drawings shown by Dr. Fox seemed to him to point to an acne condition, whose peculiarities were due to the constitution of the patient; the exact degree, extent, and duration of the inflammation surrounding the follicle in acne varying in different patients. The microscopic appearances shown were purely and simply those of inflammation, and had no resemblance or analogy to those of lupus. In regard to the pathology of molluscum, Dr. Thin suggested that the demonstrative preparations shown were capable of another interpretation than those which had been given. Some of the sections through the tumour showed no continuity between the rete and the morbid growth, just as a section through a night-cap would show no continuity between the outer and inner fold. Dr. Thin, however, asked whether, in one of the sections on the table, a continuity between the rete adenosum and the epithelial growth was not shown in the clearest manner. The preparations did not, in his opinion, demonstrate the origin from the sebaceous glands.

Mr. **Erasmus Wilson** said it was an enormous gratification to him to hear the discussion between Dr. Thin and Dr. Tilbury Fox. He felt that dermatology would assist in relieving the profession from the imputation of not being scientific, and he thought that it was a great step in advance when he heard of the suggestion that the secretion in cases of dysidrosis should be subjected to chemical tests, on the ground that if it were alkaline it would indicate that the fluid was the product of, whereas if the secretion were acid it would show that the fluid was secreted by, the sweat-glands. In his experience the disease is really a rare one. Under certain circumstances blisters to a considerable extent were formed. These blisters do not open on the surface, in process of time the fluid becomes absorbed, then some accident may break the blisters open, and then a squamous surface is found. Mr. Hutchinson calls this disease cheiro pompholix. Dr. Fox's specimen clearly showed a vesicle under the cuticle without any marks of inflammation, and in one specimen it was evident that the cells had become displaced from below upwards, and that by this means the sweat-duct had been occluded and thus a cavity was formed. He thought the specimen demonstrated the fact that even a humble sweat-gland may undergo disorganisation, and thus prevent the escape of sweat. He protested most strongly against the use of the word "psoriasis." Willan, who was a scholar, knew the meaning of the word lepra, and he, the President, thought it a great mistake that the good old term lepra vulgaris should be discarded. Lepra vulgaris is a defective nutritive condition of the skin, frequently hereditary, or occurring in the stock of a cancer or pulmonary consumption. The tendency of tissues in these cases is to take on hypertrophy, so that where lepra is hereditary you may get great enlargement of the papillæ. The observations of Dr. Thin, in reference to the disease called lupus folliculorum, had particularly interested him, as he had not himself seen such cases as those described by Dr. Tilbury Fox. He had described the disease called molluscum contagiosum under the name of molluscum adenosum. The essence of the disease is that it is an enlarged sebaceous gland which grows and stretches the skin until it becomes quite transparent. The first question he would ask a patient with molluscum contagiosum is: Have you been in the habit of taking Turkish baths? Heat, friction, and sweating excite a low form of inflammation followed by congestion of the sebaceous follicles. The question of "contagiosum" is still *sub judice.* In the dermatological collection at the Royal College of Surgeons the disease is figured under the title of acne varioliformum. A girl who had come in contact with the patient from whom the representation was taken developed a similar rash. The local application of iodine will produce a perfect specimen of molluscum.

Dr. CROCKER said that Dr. Thin was mistaken in believing that the appearances in the specimens of molluscum contagiosum were due to imperfect hardening. In reference to the fact that all the cavities in dysidrosis do not exhibit ducts, he would remark that in a flask-shaped body you would of necessity make more sections of the bulk of the body than the ducts. Dr. Thin had not proved that the cells in these cavities were pus cells; it was evident that the cases described by Dr. Fox were no ordinary cases of acne. In scrofulous patients acne goes on to suppuration, but these cases were very chronic, and clinically quite distinct from acne.

Dr. HARE protested against the name of lupus, to which a definite meaning had hitherto been attached, being applied to this disease.

Dr. FOX, in reply, would request those who maintained that the disease he had called dysidrosis was really the result of an eczematous change to look at one of the specimens, and then he would ask, Is that a globe seated in the rim of the sweat-duct, and does a duct enter it? He maintained that there was an entire absence of dermic inflammation, and he had not seen a pus cell. Dr. Thin quite ignored clinical evidence. The secretion in these cases is distinctly acid, as he had an opportunity of proving again a few days ago. In old standing cases it is undoubtedly alkaline. He could find no evidence of the rete growing downwards in cases of molluscum. As regards follicular lupus, the fact that the President, with his experience in skin disease, had not seen a case, and the remarks of Dr. Crocker, proved that it was no ordinary acne. If you treat the disease like lupus it recovers. He would ask is it true that common inflammatory products run riot among the tissues, and lead to destruction, followed by cicatrices?

The PRESIDENT said the only way to settle the dispute is to ventilate the question; it was quite clear to him that Dr. Fox had met with a rare case.

December 16th, 1878.

ERASMUS WILSON, F.R.C.S., F.R.S., President, in the Chair.

Dr. WM. HENRY DAY read a paper on

HEART DISEASE IN CHILDREN, CONNECTED WITH VALVULAR DISEASE AND WITH THORACIC DEFORMITY.*

He observed that those affections associated with valvular change occur for the most part on the left side of the heart (except in cases of congenital disease of the right side), and that they are of common frequency among girls.

Disease of the heart may exist in children independent of rheumatism or febrile disorder; the valves may become structurally changed from causes that cannot be ascertained.

In children there is less liability for valvular disease to increase, and a power of tolerance, and even of repair, which are not seen later in life. Indeed, it is difficult to conceive how little disturbance is sometimes created in the general health when the central organ of life is structurally damaged. The sole explanation of this fact may be that the valves are mechanical arrangements to facilitate the circulation, and are not immediately concerned in the nutritive functions of the body. Heart disease consequent on the thoracic deformity generally takes place in rickety subjects. The distension of the heart's cavities leads to excited action of that organ, even where there is no valvular inperfections, and increased action follows to overcome the impediment. Every time the heart contracts it fills the aorta, which becomes dilated laterally and elongated at the same time.

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* This paper has been published *in extenso.* See 'Medical Press and Circular,' May 7th and 14th, 1879.

Sphygmographic tracings were shown from patients suffering from hypertrophy and dilatation of the heart, and allusion was made to the varying force of the organ, and the actual condition of the circulation under rest and under fatigue.

The author laid emphasis on the fact that these terrible cases of heart disease were attended with a burden of misery appalling to witness, and that if we could not effectually deal with the disease, we may draw from it this important lesson and impress it on the minds of parents, that every case of heart disease in a young child, whether following rheumatic fever, or associated with a rickety constitution in which the evidences of organic change have once been established, demands long and careful treatment in its early stages. Heart disease in children, whilst it is one of the most frequent of their chronic disorders, is at the same time one of the most grave. When congenital it limits their development and cripples their power, and when it is the result of acute rheumatism, it often interferes with their growth, and still more so with their capacity to learn.

Dr. Day then alluded to the importance of not attaching too great significance to a murmur heard over the mitral orifice in young and weakly children. In the absence of rheumatic history and endocarditis, when we remember how the blood undergoes change in its composition, how slight may be the modification necessary to alter the ventricular lining, how a point of roughness may spring up, a vegetation grow on the curtain of the valve, and relaxation or alteration in the muscular structure of the heart may arise so as to alter or modify the normal sounds.

Just as the muscles which supply the limbs are sometimes weak and flabby from disease or disuse, so the heart from states of profound anæmia, or from loss of blood, as in purpura, becomes dilated and relaxed, the two conditions are sufficient to generate a murmur at any of the heart's orifices.

Several illustrative diagrams were placed before the Fellows.

In the discussion which followed,

The PRESIDENT asked whether there were any pathological difference in the affections of the valve consequent on thoracic deformity in rickety subjects and that caused by rheumatism; whether, for instance, in rickets there were an exuberant growth of fibrous tissue. The reason for heart disease being more frequent in girls than in boys might be explained by their different habits.

Dr. **Sansom** remarked that even up to a comparatively recent period writers had taken very scant notice of the heart disease of childhood, it was, however, much more common than was supposed, and a marked feature was its symptomless origin; for instance, he had known extreme pericarditis and endocarditis occur with hardly any symptoms and hardly any departure from the normal condition of the child, the child having previously had some rheumatic phenomena. He would ask, is the rickets a consequence or a cause of the heart complication? And he would himself reply. Rather a cause than the converse. As regards etiology, cases might be divided into three groups: 1, rheumatic; 2, a papillar form, simply giving rise to warty growths; 3, ulcerative; putting aside degenerative changes, which are not likely to occur in childhood. In the rheumatic form we have to do with an inflammation of all the layers of the valve, especially the fibrous; the papillar form is an affection of the superficial layers. He does not share the anxiety of Dr. Day about these cases. Children with uncomplicated valvular disease do nearly as well as those without; the danger is adhesion between heart and pericardium; the heart has a very great power of adapting itself to the valvular changes; the only other danger is embolism. Rest is the treatment above all others.

Dr. **Farquharson**, in speaking of the causation of heart disease, said that murmurs due to degenerative changes such as syphilis, alcoholism, worry, are not met with in childhood, therefore, rheumatism is the great cause, the attack being often only very slight, and hardly requiring the child to lie up. He agreed with Dr. Sansom as to the occurrence of acute cardiac lesions with comparatively slight symptoms, but though it is common in adults to discover heart disease quite accidently, in children there is usually something which would draw the attention to the fact. In childhood growth and development prevent the compensatory changes that occur in adults, there being more dilatation and less hypertrophy. As regards treatment, iron and digitalis give most marvellous results.

Dr. **Symes Thompson** said that rest and the treatment indicated by Dr. Farquharson have surprised him even in cases of great hypertrophy or stenosis. Last week he had occasion to examine for insurance a gentleman, æt. 45, already insured to a large amount. On auscultation he discovered a loud diastolic, musical, basic murmur, probably due to rupture or bending of the valve. As regards compensation during childhood the powers are so devoted to growth that there is very little capability of adaptation to new conditions. Even in cases of cynosis he thought that children might live on for years if properly treated.

Dr. FOTHERGILL was of opinion that thoracic deformity as a cause of valvular disease had not had sufficient attention paid to it. Rokitanski and Hilton Fagge have, however, ably written on the subject. Strain is undoubtedly a cause of aortic disease, but he also thinks it is a cause of mitral disease. Why mitral disease should be more common in girls than in boys is at present inexplicable. There is no doubt that mitral disease in many children seems to have no tendency to get worse. Latham pointed out that an inflammatory storm passed over the endocardium, the exudation of cells caused thereby has a tendency in after life to undergo contraction. Many children, the victims of heart disease, passed through childhood and puberty exceedingly well—occasional rest in bed being most important—others break down at puberty. It would be an interesting subject to discuss how far the condition which produces growth in the wall is correlated to the change in the valve. Children, like adults, are liable to cough when the lungs are gorged with blood, but opiates of all sorts to check the cough are to be avoided in childhood. The belief that ioduretted frictions are of service in valvular disease is more nearly allied to credulity than faith, and there is no evidence as to the use of iodide of potassium in influencing beneficially the progress of the lesion.

Dr. DE HAVILLAND HALL mentioned diphtheria as another cause of valvular disease in childhood. Congenital heart disease was not necessarily attended by any marked symptoms; a case he had attended in consultation with Dr. Walshe at the beginning of the year proved this. The patient, a boy, æt. 11, was examined on account of a slight catarrh, and a loud murmur, audible all over the chest, was discovered; nevertheless, the boy had no symptoms referable to heart mischief. He mentioned several cases of aortic regurgitation which had ended fatally without any previous symptoms, and he thought that this form of heart disease was the one which most usually existed without betraying its presence.

The **President** mentioned the case of a boy at the Royal Medical Benevolent College, Epsom, who had recently died quite suddenly; at the post-mortem complete adhesion of the heart to the pericardium was discovered.

Dr. **Day**, in reply, stated that he had purposely omitted the subject of treatment as it would have involved too lengthy a discussion; he would, however, mention that in the second case the patient was greatly benefitted by digitalis and iron. Digitalis, iron, and strychnia was a favourite combination of his. He had not seen digitalis cause the great increase in the urinary secretion which some writers had described. He thought Dr. Fothergill's suggestion about heart cough most instructive. He mentioned a case of heart disease due to diphtheria.

January 6*th,* 1879.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Dr. **John C. Thorowgood** delivered his first Lettsomian Lecture on **Bronchial Asthma.**

Lecture I.—HISTORY AND NATURE OF ASTHMA.

January 13*th,* 1879.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Mr. **Lennox Browne** read notes of a

CASE OF DIPHTHERIA

occurring in a girl with enlarged tonsils, in whom he had removed the tonsils and uvula during the progress of the disease. The existence of a well-marked membranous deposit on the soft palate and tonsils, the presence of albumen in the urine, and the occurrence of well-marked paralytic symptoms at a later period, proved conclusively that the disease from which the patient was suffering was diphtheria. Before the operation the girl was in great danger from asphyxia, and it became a question of tracheotomy or the removal of the tonsils. Mr. Browne elected the latter. As might have been expected, a membranous deposit formed on the raw surfaces, but the relief to the dyspnœa was marked, and the girl made a good recovery under the ordinary treatment.

Dr. **de Havilland Hall** said that the success which had attended Mr. Lennox Browne's treatment would encourage him to recommend a like procedure in similar cases.

Dr. **Llewellyn Thomas** stated that he had seen Mr. Lennox Browne's patient, and that it was undoubtedly an attack of diphtheria. He had himself had a case in which the breathing was greatly obstructed by an enlarged uvula, and he now regretted that he had not removed it, as the patient died.

Mr. **William Allingham** showed a specimen of

AN EPITHELIAL GROWTH,

which he had that morning removed from the rectum of a patient, æt. 52, in St. Mark's Hospital. The symptoms had lasted from a year to a year and a half; there was great pain and considerable loss of blood.

On making a rectal examination, Mr. Allingham was able to reach the upper edge of the growth with his finger.

The **President** asked what amount of blood had been lost at the operation.

Mr. **Allingham**, in reply, stated that the operation had been attended with considerable loss of blood:

Dr **Althaus** then read the paper of the evening entitled—

CONTRIBUTIONS TO THE PATHOLOGY OF PERIPHERAL NERVE DISEASE.*

He commenced by alluding to discrepancies amongst the authorities as to the frequency of neuritis which some considered extremely rare and others a tolerably common affection, while his experience led him to believe it to be more common than is generally supposed. He then went into the pathology of acute and chronic neuritis, describing their various forms, such as interstitial, proliferating, and hyperplastic parenchymatous neuritis, and the ascending and descending form of the disease. The fundamental difference between neuritis and peri-neuritis he stated to be that, in the former the central core or cylinder-axis undergoes the same degeneration as the other portions of the nerve, while, in the latter, this important part escapes destruction.

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* This paper has been published *in extenso*, see "Brain," January and April, 1879.

Dr. Althaus then described a case of acute olfactory neuritis which had occurred in the commencement of locomotor ataxy in a patient under his care in the hospital. In this case subjective olfactory sensations had been present for about a month, after which anosmia became established. The case was analysed with regard to pathology, and the conclusion arrived at was, that neither the accessory mechanism of smell nor Ferrier's olfactory centre in the subiculum cornu ammonis were affected, but that it was a case of acute neuritis of the olfactory bulb at the base of the brain. The patient had since died, and the diagnosis had been confirmed by post-mortem examination.

Dr. Althaus then related a case of auditory neuritis, going, at the same time, thoroughly into the pathology of Menière's disease and the physiology of the semicircular canals.

In the case referred to, a severe form of tinnitus occurred together with vertigo; these, after persisting for about a month, led suddenly to complete deafness. This patient was also subject to locomotor ataxy. The affection was diagnosed as acute inflammation of the labyrinthine expansion of the auditory nerve, followed by sclerosis of the posterior columns of the cord. The patient ultimately recovered of the ataxy, but remained stone deaf. The last point gone into was perineuritis of the portio dura, which was divided into two classes, viz. the one where the inflammation occurs outside, and the other where it occurs inside, the Fallopian aqueduct. Internal perineuritis was again subdivided into three different sections, the first being from the stylo-mastoid foramen to a point just before the chorda tympani, the second embracing the chorda and the Stapedian nerve and the third corresponding to the ganglion geniculum, where the petrosal nerves take their rise. The symptoms of inflammation in these different localities were now described, there being paralysis and loss of reflex excitability, but no electric wasting-test in the external form of the disease; paralysis and wasting-test in internal perineuritis throughout the Fallopian canal;

loss of taste and hyperacusis in the second Fallopian section, and paralysis of the levator palati in the third. The prognosis and treatment of these affections were then discussed, and it was stated that the chances of recovery in perineuritis were generally more favorable than in neuritis.

No discussion followed.

January 20th, 1879.

ERASMUS WILSON, F.R.C.S., F.R.S., President, in the Chair.

Dr. JOHN C. THOROWGOOD delivered his second Lettsomian Lecture on BRONCHIAL ASTHMA.

LECTURE II.—PATHOLOGICAL TENDENCIES OF ASTHMA.

January 27th, 1879.

ERASMUS WILSON, F.R.C.S., F.R.S., President, in the Chair.

Dr. R. J. LEE exhibited a steam draft inhaler, as an improvement on the one he showed on a former occasion.

He said that some of the Fellows of the Medical Society were already acquainted with the general principle on which the steam draft inhaler was constructed as he had explained it when he first introduced the inhaler to the Society in 1876.

The scientific question involved in the construction of the machine was the motive force possessed by a jet of steam when enclosed in a tube to which air was freely admitted. A cone of steam would be found experimentally to possess different degrees of power in propelling air along a tube, and by adapting a tube of proper diameter to a jet of definite size, a current of moist air could be obtained which could be inhaled without effort. The chief improvements which had been made were in the reduction of the tube to a simple pin-hole which allowed of great simplicity in construction; and the regulation of the temperature of the vapour by admitting more or less air through the tube.

In the treatment of cases of hooping cough, laryngitis, croup, diphtheria &c., very satisfactory results had been obtained, and as various medicinal agents such as carbolic acid, oil of pine, tincture of benzoin, &c., could be used, Dr. Lee thought the inhaler might be safely recommended to the notice of the profession.

Mr. **Royes Bell** spoke as to the admirable manner in which the apparatus worked.

Dr. **Douglas Powell** asked whether the apparatus could be used for non-volatile ingredients in the form of spray, and whether it was likely to blow up, as Siegle's apparatus had done.

Dr. **de Havilland Hall** thought Dr. Lee's inhaler would be very useful in throat practice.

The **President** also read a letter from Mr. Donald Napier in which he spoke very highly of the use of the instrument in hooping-cough and malignant sore throat.

Dr. **Lee**, in reply, stated that his apparatus would not explode, that it was only suitable for volatile products.

Dr. **Sansom** then read a paper on

THE DIAGNOSIS OF CONGENITAL DISEASES OF THE HEART IN CHILDREN.

It is generally supposed that diseases of the heart are uncommon in children. Only a few years ago they were ignored, or treated very cursorily in the text books treating of the diseases of early life. Rilliet and Barthez were first to rescue them from this oblivion, and Dr. West followed, giving his own experience in the careful and systematic manner which characterises all parts of his treatise. Bouchut, in 1867, wrote that, in the then state of science it was impossible to give the history of heart disease in children with much detail; he had observed several cases of alterations of the valves but, except as regarded the difficulties of diagnosis, he felt entitled to say that the stethoscopic phenomena were the same in the child as in the adult.* Dr. West's account of heart disease in children,† is a superficial commentary on this statement. It shows how valuable are the lessons to be learnt in this field of observation, a field which the systematic treatises on heart disease have scarcely endeavoured to explore. During the last few years the physical examination of the heart has become more systematic and precise and it may not be unfruitful to attempt to read some of the lessons obtained from the observation of a tolerably large number of cases. Making a rough estimate I find that the proportion of cases of heart disease as compared with those of all other diseases presented at the out-patient department of the North Eastern Hospital for Children is 3 in 500. I have no doubt these figures underrate the prevalence of the disease because in some cases the cardiac region must escape exploration, and the existence, and even the rise and progress of heart disease may occur without the manifestation of any symptoms betraying its probability. Its position, however, among the *serious* diseases of childhood (diseases of infection being excluded) is very different, as shewn by the fact that of 227 medical in-patients admitted during 1876, thirty-eight manifested disease of the heart. I propose now to consider the records of 130 cases of heart disease in children of the age of twelve years and under; these records have been, in my opinion, taken with sufficient care to justify certain general deductions. For the notes of about forty cases I am indebted to my colleagues, the remainder have been under my own care and observation. I shall illustrate certain points by reference to many other cases which have been excluded on account of partial incompleteness from the general list.

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* 'Traité Pratique des Maladies des nouveaux-nés et de la seconde enfance.' 5e Ed. Paris, Bailliere, 1867.

† 'Diseases of Infancy and Childhood.' 6th ed. Lond., Longmans, 1874.

As regards *sex*, I find that the cases observed included fifty-five males and seventy-four females. So the prevalent view is confirmed that heart disease is much more common in little girls than in boys. The ages at which the cases were presented are thus shown:—first year of life two cases; second year, five cases; third year, four cases; fourth year, five cases; fifth year, eight cases; sixth year, fourteen cases; seventh year, fourteen cases; eighth year, ten cases; ninth year, seventeen cases; tenth year, eighteen cases; eleventh year, twenty-three cases; twelfth year, nine cases. It is thus seen that the proclivity of children to manifest the symptoms of heart disease which call for treatment increases almost steadily from year to year until the age of eleven years; in the following year of life there seems to be a slight fall in the figure of prevalency.

The division of the subject to which I shall call attention includes *congenital diseases and malformations*, and this from the point of view of diagnosis. This division then can I think be best considered under the following sections:—(1), cases of congenital anomally presenting no murmurs; (2), congenital anomally with murmur *not* at the pulmonary orifice; (3), congenital anomally with pulmonary murmur; (4), conditions of endocarditis. In the first section, *congenital anomally without murmur*, the diagnosis is arrived at from the evidence of the existence of *cyanosis*. In the list of cases which I have here brought forward there is only one case in which cyanosis existed without record of murmur, but I have met with several cases in which murmur has been completely absent. This is in perfect accord with the experience of other observers. In such conditions, I think, we are justified in arriving at the diagnosis that there is patency of the foramen ovale. It is distinctly proved that this can exist without giving rise to murmur. Dr. Hayden says that he has not met with a single example of a murmur which was clearly traceable to this anomally as its cause.* In thirteen cases examined by Dr. J. Wolfe in which there was more or less patency of the foramen ovale, murmur was not noted in a single instance. We were unable to follow up the case in my list to its termination, for it migrated with its parents to Holland. It came under notice at the age of five weeks and, according to our information, died when six or seven months old. We turn now to the second section, comprising cases presenting murmur which we consider not to be generated at the pulmonary orifice. In this series are four cases; two were twins. In none of them was there complete cyanosis, but venous turgescence with variable cyanosis in one whilst the other was noted only as presenting signs of anæmia. In the first case Maud F—, æt. 1 year and 2 months, one of the twins, there were great pallor and blueness of surface noted only when the child was excited; the veins were generally dilated. A soft and gentle murmur was heard over a limited area internal to the apex beat and in the third interspace, the sounds of the heart heard in the axilla being quite uncomplicated. In the twin sister of this case great pallor was noted without obvious cyanosis, a soft systolic murmur was heard fast to the inner side and a little above the nipple. On subsequent occasions no murmur could be heard. Both these children manifested diarrhœa, but improved much under treatment. Unfortunately owing to the migratory habits of the parents, after seven weeks of treatment they could not be traced. The third case, George E—, came under observation at the age of seven months. There was no facial cyanosis, but the finger nails were bare. He had diarrhœa, thirst, and eczema. He manifested a loud systolic murmur heard over the whole præcordium, but most intense at a point internal to the position of the apex beat, it was audible at the back, but became less defined as the stethoscope travelled from the apex. This child only came once under observation; we heard that he died a fortnight afterwards.

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* 'Diseases of Heart and Aorta,' 1875, p. 784.

I consider that the murmurs heard in these cases indicate one of two pathological conditions—patency of foramen ovale and incompleteness of inter-ventricular septem. I have said that with cyanosis in the absence of murmur we may conclude that there is communication between the auricles, but I by no means would imply that the presence of a murmur indicates the absence of inter-auricular communication. Cases proving that a murmur may exist with patency of the foramen ovale alone as its cause have been recorded by Dr. Markham,* Dr. B. Foster,† and Dr. Mayne.‡ Dr. B. Foster has, as regards one of his cases, carefully noted the characters of such murmur—it was systolic, heard loudest between the third and fourth ribs of the left side at their junction with the sternum; it was heard as high as the upper margin of the third rib, but was not heard at the apex. The murmur varied in intensity at different times. In Dr. Foster's other case the murmur accompanying the first sound was faint and heard over a limited spot on a level with the lower edge of the third rib at its junction with the sternum; this murmur varied also in intensity and occasionally gave only the idea of muffling of the first sound. In Dr. Mayne's case the bruit was localised at the sternal end of the left fourth costal cartilage. With Dr. B. Foster we may consider that it is due to the flow from the vena cava through the auricles during the diastole of the latter; "the passage of a rapid current of blood under considerable pressure from the over-full right auricle, through the oval hole into the less distended left auricle,"§ From a consideration of the area of audibility of the murmur in the cases of the twins I shall conclude that with them there was patency of the foramen ovale.

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* 'Med. Times and Gazette,' April 4th, 1857, p. .

† 'Clinical Medicine,' p. 35. London: Churchill, 1874.

‡ 'Dublin Journal of Medical Science,' vol. i, 1841.

§ Dr. B. Foster, loc. cit., p. 54.

In the other case, though this might be concurrent I should urge the probability of another cause, imperfection of the inter-ventricular septum. I should base this opinion on the loudness, unvaryingness, and extent of conduction of the murmur.

I now turn to the fourth case of this series. In this case I think there is no doubt as to the precise diagnosis of the pathological condition. Wm. H. S—, æt. 4, came under my care with habitual cough and dyspnœa and occasional epistaxis. He had ailed since birth and coughed since he was seven weeks old. He was blue even when a baby. There were signs of bronchitis. I noted a soft systolic murmur at the exact apex. I soon lost sight of him, but my colleague, Dr. Barlow, who had him under treatment at the Hospital for Sick Children in Great Ormond Street, has kindly sent me some observations on the case. The child is now seven years old, has blue cheeks, lips, and ears; there is very slight clubbing of the finger-ends. There exists now no murmur; the left side of the heart is enlarged and the impulse is heaving. There is no evidence of enlargement to the right of the sternum. Assuming my observation to be precise, that the murmur which I heard early in the case was located at the precise apex, I should be inclined to conclude that it was a case of imperfection of the inter-ventricular septum, in which the edges of the foramen had in course of time become so smooth as to generate no murmur.

I now turn to the consideration of the third subdivision of cases, including those of *congenital anomaly in which there was murmur considered to be generated with the pulmonary artery or its orifice.* It is to be noted that not all these presented the phenomena of cyanosis. The cases were six in number; in two there existed marked cyanosis, in the others there were varying degrees of sallowness up to the most pronounced anæmia. The diagnosis chiefly rested upon the site and characters of the murmur. In all cases this was systolic, for the most part intense, superficial, and rough. In one case it resembled the quality of an anæmic murmur. Pronounced tactile thrill was noted in only one case. As regards localisation of the murmur, in one case it was distinctly noted as occurring in the pulmonary area, in this case a doubtful systolic murmur at the apex coexisted. In another case, in which there was a marked thrill at the base of the heart, preceding and running up to the second sound, a prolonged systolic bruit was heard, followed by a more intense short bruit (reinforcement), the latter abruptly terminated by the second sound. These abnormal sounds were audible, though less plainly, at the apex as well as over the aorta; a systolic bruit was heard at the back over the root of the lung. In another the maximum was distinctly over the pulmonary area, but it was conducted towards the axilla. In a third a loud murmur heard over a wide area about the base and also between the scapulæ had its maximum at the junction of the third left costal cartilage with the sternum, and it was conducted into the left subclavian region. In a fourth a very intense murmur was heard at the base, but could not be located at the pulmonary orifice; it was heard loudly, as if propagated up the vessels of each side of the neck. In a fifth the murmur was heard over the right cavities, the pulmonary artery, and the vessels of the neck, and a first-sound murmur was also heard at the apex. In the sixth a loud systolic murmur, heard at the base and along the vessels, had its greatest intensity in the subclavian regions, *especially the right*. In this case there was evidence of enlargement of the thoracic glands of the right side.

Now some interesting questions arise as to diagnosis. You will notice that there are considerable differences in the area and diffusion of the systolic murmur, which I have, nevertheless, ascribed to pulmonary stenosis. "The area of pulmonic murmur," says Dr. Hayden, in his text-book, "corresponds to a circle of about two inches in diameter, covering the inner portion of the second intercostal space of the left side and adjacent portions of the second and third costal cartilages, and also, to a slight extent, the edge of the sternum. *Beyond the limits of this circle murmurs of pulmonic origin are rarely audible.*" Furthermore, Dr. Hayden says the murmur may be distinguished from systolic murmur in the aorta by its *abrupt* termination in the direction upwards at the level of the middle of the second costal cartilage; its not being audible to the right of the mesial line of the sternum, and its non-transmission into the carotids, sufficiently distinguishes it from the latter, irrespectively of the difference as regards the point of maximum intensity in the two cases." It will be at once seen that this experience is greatly at variance with my own. Let me illustrate the point by the record of a case. Lydia C—, æt. 8½, was admitted under my care at the North Eastern Hospital for Children on January 12th, 1873. She seemed weak, and was *excessively pale*, but presented no blueness nor obvious dyspnœa. She had been frequently ailing since birth, but there was no noticeable symptom except weakness. She was one of seven children, of whom four were living; one died during dentition. The mother had had one stillbirth; she was quite well during pregnancy, and gave no account of "maternal impression." The child had been always quiet and very intelligent, and had not had any illness, except what was called gastric fever eighteen months before admission. There was manifest a loud, rough, intense, systolic bruit over the base of the heart and diffused over a wide area; it was difficult to localise its maximum at any given point in the basic area, but it *seemed* to be loudest at the *aortic* cartilage. During the progress of the case there occurred frequent diarrhœa and increasing emaciation; the radial pulse became feebler to almost extinction, delirium ensued, and death on March 17th, 1873. The autopsy showed a small, pale, contracted heart, weighing 2¾ oz. The aorta and its valves were quite normal, but the pulmonary artery was very small in calibre (diameter four tenths of an inch), its walls firm and rigid, so that it resembled the aorta or a systemic artery. It was a pulmonary artery in miniature, with valves minute but perfect; its capacity was about one third that of the aorta. The wall of the right ventricle was greatly hypertrophied, so that it was thicker at its thickest part than any portion of the left ventricle. The foramen ovale was patent, the aperture being circular, with rounded edges; the communication between the auricles quite unimpeded. There was no imperfection in the septum between the ventricles; the valves were all healthy.

It is obvious that the rules commonly laid down for the diagnosis of pulmonary stenosis from the localisation of the murmur were at fault in this case. Dr. Hayden says that pulmonary may be distinguished from aortic stenosis by the murmur being "inaudible to the right of the middle line of the sternum, in the aorta, and in the carotid arteries."* Here the bruit was loud in all these situations, it even seemed *louder* over the aortic cartilage than elsewhere. I have a case now under treatment in which I consider the murmur is due to pulmonary stenosis, and yet it is distinctly loudest in the aortic area, and is propagated up the vessels. How then can the diagnosis be attained? First, supposing that the murmur be located at the base, right or left, we have to consider the great rarity of aortic stenosis as a congenital lesion, or as a disease of early life. If, then, there is sufficient evidence that the condition dates from birth, and if there is cyanosis or extreme pallor, there is a probability of pulmonary obstruction. It may be, however, that the murmur is hæmic. On the question of the prevalence of hæmic murmurs in children, I find that my own experience varies from that which has been recorded by some observers. Dr. West says, that "those endocardial, arterial, or venous murmurs which are produced by an impoverished state of the blood are very rarely indeed heard in children under seven years old, and are by no means common until that age is attained, at which the changes that take place as puberty approaches have commenced or are on the eve of beginning."* On this point I find myself differing from one with whose observations I am almost constantly in accord. I have observed, noted, and called attention to murmurs having all the characters of anæmic bruits in numbers of children of all ages; these have had all the characters usual in adult life localised at the base or over certain vessels, and accompanied in many instances by loud venous hum, but passing away with recovery of general health. The diagnosis of an anæmic from a pulmonary murmur, therefore, becomes important, and I think this is arrived at from the intensity, roughness, and the superficiality of the latter, as well as, of course, from the concurrent symptoms.

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* Loc. cit., p. 1004.

But, furthermore, I have found that anæmic murmurs *complicate* pulmonary stenosis, and, I think, tend to explain some of the phenomena of unusual conduction. In the case which I have narrated there was distinct propagation of the murmur up the vessels of the neck. The murmur heard here was, I have no doubt, hæmic. In another case there was not only systolic murmur heard up the vessels of the neck, but also pronounced venous hum. I think, therefore, that the explanation of the conduction, or apparent conduction, of a murmur, the organic cause of which is obstruction of the pulmonary artery to the right of the sternum, is to be found in the coexistence of a hæmic murmur heard in the aorta and large arteries.

Another cause of abnormality of conduction, as shown in one case, is, I consider, enlargement of the bronchial glands. In the case in which the bruit was heard loudly in a line leading towards the axilla, I think there must have been imperfection of the intraventricular septum as a concerning cause. We must bear in mind that such imperfection, or else patent foramen ovale, is commonly met with in the subjects of pulmonary stenosis. A very important clinical feature in cases presenting this anomaly is the manifestation of *tubercle.* In the case just described there were signs of wasting and diarrhœa, and at the autopsy the lungs were found to be studded with masses of soft tubercle, the mesenteric glands were diseased in like manner, and the large intestine throughout its whole extent presented tuberculous ulceration. It is no doubt a correct observation made by Rokitansky and Traube that tubercular changes in the subjects of chronic cardiac disease are rare. The single exception to the rule is in the case of pulmonary stenosis; in such tubercular phthisis is the usual mode of death. This has been noted by Lebert and Peacock. In another case described under the care of my late colleague, Dr. Woodman, closely resembling that I have just narrated, progressive emaciation and diarrhœa were manifested, and in one of the others, besides wasting, there were enlargements of glands, including, as we believed, the bronchial, which were probably becoming caseated.

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* 'Diseases of Infancy and Childhood,' sixth edition, p. 545.

I now approach the consideration of a section, including cases which present considerable difficulties in regard to precise diagnosis —cases of *congenital affection complicated by endocarditis.* Dr. West says: "Congenital malformation of the heart seems to have an important, though, perhaps, not an easily explicable influence in predisposing to inflammation of its valves or of its investing membrane. Thus, in one case of acute pericarditis, in one of chronic pericarditis with affection of the endocardium, and in two others of old-standing valvular disease, there was some malformation of the heart which must have existed from birth, though in two instances the symptoms did not appear till long afterwards. It is well, then, in cases of heart disease, the origin of which is obscure, to bear in mind this possible cause of the affection."* Our task is to differentiate this dual condition from that of simple cardiac anomaly, on the one hand, and from endocarditis as an acquired disease after birth, on the other. As an illustration of what I consider to be a clinical example of this class of cases, I will take the following:

Louisa C— first came under my notice at the age of a year and a half. She manifested typical cyanosis, and presented clubbing of the finger-ends and curvation of the nails. She had been more or less blue from birth, and manifested occasional cough and dyspnœa. The cardiac dulness existed over a wide area, its left limit reaching to the anterior border of the axilla, and a *systolic* murmur was heard outside the nipple. The chest-wall was much distorted, the lower ribs being curved inwards. I had the child long under care, the chief troubles being those of dyspnœa and cough. Another troublesome symptom common in my experience in these cases being stomatitis, with ulceration of the edges of the gums, oftentimes with considerable hæmorrhage. When she was three years and five months old, in addition to the blowing systolic murmur heard at the apex and in the axilla, there was a rolling presystolic murmur which had not been evident before. There was here no doubt of congenital anomaly, but when the case first presented itself it seemed unlikely that this should account for the very great dilatation of the left chambers. Taking this, in conjunction with the localisation of the murmur in the mitral area, I considered that the indications were that, in a case of cyanosis with intercommunication between right and left chambers, endocarditis had been set up with the result of inducing mitral regurgitation with great dilatation of left auricle and ventricle. The subsequent development of a presystolic murmur in the mitral area confirmed me in this view, and I thought that renewed endocarditis had superadded a new difficulty, that of mitral stenosis.

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* 'Diseases of Infancy and Childhood,' p. 529.

In this case there was no hesitation in arriving at the diagnosis that there was congenital defect, the cyanosis was so complete. In many others, however, the determination of this question may be very perplexing. We may proceed by the method of exclusion. In a given case we first inquire whether there is any history of rheumatic, scarlatinal, or other acute causation of endocarditis. Cases are thus reduced to a small minority. In these we have to investigate whether there have been troubles relating to heart or circulation dating from birth; but, even supposing that the evidence has pointed to the probability of such congenital causation, the difficulties are very great. Of such difficulty the following case, which came under the care of one of my colleagues at the London Hospital, is an example:

Alfred M—, æt. 7 years, had been short of breath from his birth, and cyanosis of the face had been noticed when he was between four and five years old, but only under circumstances of excitement. There was no history of rheumatism, nor other obvious cause of heart disease. The apex of the heart was felt to beat in the sixth interspace outside the nipple line; over the apex was a systolic thrill. A loud systolic murmur was heard with maximum intensity at the apex, but conducted to the axilla and the back; the pulmonary second sound was accentuated. Dropsy supervened, and was treated by Dr. Southey's drainage method with temporary improvement, but cardiac and respiratory troubles increased and the child died. At the post-mortem examination the pericardium was found firmly and extensively adherent, the right cavities of the heart dilated, the left auricle dilated, the edges of the mitral curtains thickened, and the mitral orifice slightly contracted; the thickening of the endocardium extended to the aortic valves, but these latter were not so altered as to be incompetent. These changes, in fact, exactly resembled those of rheumatic endocarditis.

I have formerly called attention to the occurrence, in my experience, of both pericarditis and endocarditis of the rheumatic form in children without the manifestation of any articular phenomena, and even without a single objective symptom of pain or distress. This is a sufficient commentary on the difficulty of determining between a congenital and an acquired causation in the class of cases which we are discussing. I may say, however, that, in my opinion, only three other cases on my list present a probability of having congenital anomaly for a cause, and two of these are the subjects of rickets.

In conclusion, I venture to formulate the following propositions:

1. In cases of congenital cyanosis in which no cardiac murmur is manifest there is probably patency of the foramen ovale.

2. In cases of cyanosis with systolic murmur, varying in intensity, heard over the sternal ends of the third and fourth costal cartilages over the intercostal space, there is probably patency of the foramen ovale.

3. In cases of cyanosis with loud, unvarying, systolic murmur, with maximum intensity internal to the position of the apex beat, but heard also at the back between the scapulæ, there is probably imperfection of the interventricular septum.

4. In cases of cyanosis, or of marked anæmia, in children who manifest a pronounced, superficial systolic murmur at the base of the heart, there is probably constriction of the pulmonary artery or its orifice. Such murmurs may be complicated by hæmic murmurs.

5. In cases of congenital affection of the heart in which there is evidence of considerable dilatation of the *left* chambers, it is probable that endocarditis affecting the valves has constituted a complication.

Dr. **Symes Thompson** asked whether cases of congenital defect at the pulmonary orifice were not those in which life was prolonged to puberty? He had recently had two such cases under treatment, and there was every probability of life being prolonged.

Dr. **R. J. Lee** felt disposed to give up arriving at any conclusion in the heart disease of childhood; the character of the murmur gives us little or no assistance. The question in all these cases resolves itself into a matter of prognosis, treatment being of little avail. As an instance of the difficulty of arriving at a definite conclusion from the murmur alone, he said that it was quite possible in a child for the foramen ovale to become enlarged, and the murmur to diminish in intensity, though the disease was increasing. He regarded maternal impressions of considerable importance in the etiology of congenital heart disease. One of the chief factors in the production of congenital murmur is the rigidity of the parts about the foramen ovale.

Dr. **Boyd**, from an extensive post-mortem experience, agreed with the author that female children are more likely to die of heart disease than male.

Dr. **de Havilland Hall** considered the statement made by Dr. Sansom, that pulmonary stenosis was frequently associated with tuberculosis of the lung, of great interest in view of the immunity from pulmonary consumption enjoyed by the victims of other forms of heart disease. Niemeyer considered this immunity to be due to the lungs being gorged with blood, and consequently less prone to caseation; in pulmonary stenosis, on the contrary, the lungs are of necessity anæmic.

Dr. **Leared** said that there are a considerable number of cases occurring among adults in whom heart disease comes on insidiously, and he thought that in many of these cases there was, in all probability, some congenital defect which had been overlooked. He could not agree with Dr. Lee as to the rigidity of the parts about the foramen ovale being the chief cause in the production of the murmur.

Dr. **Allchin** considered the most valuable part of Dr. Sansom's paper was that in which he spoke of the difficulty of diagnosis of heart disease in childhood. He was of opinion that the cases of congenital heart disease which last any time are those in which there is some compensatory lesion; in acquired valvular disease this does not occur to anything like the same extent; therefore, in these cases, periods of comparative quiet and comfort are less frequently met with than in congenital malformations, and he thought that this might assist us in making a diagnosis.

Dr. J. **Milner Fothergill** asked Dr. Allchin what lesion could compensate, say for a congenital malformation?

Dr. **Allchin** gave as an example of what he intended, pulmonary stenosis, with a patent foramen ovale.

Dr. **Day** mentioned two cases of extreme cyanosis in childhood without murmur. He thought that inasmuch as there was greater recuperative power in childhood the prognosis in heart disease need not necessarily be so gloomy as in adults.

Mr. G. C. **Coles** asked whether the author had seen spinal disease associated with endocardial murmurs?

Dr. **Sansom**, in his reply, agreed with Dr. Symes Thompson that in the cases which lived the longest there is rather a narrowing of the pulmonary orifice than a communication between the two sides. He also agreed with Dr. Lee as to the importance of maternal impressions. He thought that even in adults valvular mischief of rheumatic origin may arise so insidiously that it would be impossible to differentiate these cases from those in which the cause of the disease was congenital. He could not agree with Dr. Allchin, because, in his opinion, it was much more difficult for a congenital defect to be compensated for than for the acquired form; still he thought that Dr. Fothergill had stated the case too severely. He disagreed with Dr. Day, as he believed that we are more likely to underrate than overestimate murmurs in childhood. He had not noticed the coexistence of heart and spinal disease.

February 3rd, 1879.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Dr. **John C. Thorowgood** delivered his third and last **Lettsomian Lecture**—

Lecture III.—THE TREATMENT OF ASTHMA,

at the conclusion of which a vote of thanks by acclamation was carried.

Dr. **Rogers Harrison** proposed, Mr. **William Adams** seconded, and it was carried, that Dr. Thorowgood be requested to print his Lettsomian Lectures.

Dr. **Thorowgood**, in reply, thanked the Fellows for the kind way in which his lectures had been received, and expressed his willingness to print them if he might be allowed to dedicate them to the President.

February 10*th*, 1879.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Dr. **Matthews Duncan** read a paper on

PUERPERAL SEPTICÆMIA AND PYÆMIA,

of which the following is an abstract. After referring to the now accumulated evidence that puerperal mortality was as high in private practice as in well-managed maternity hospitals, Dr. Matthews Duncan observed that the greatest source of this mortality was puerperal septicæmia and pyæmia.

Surgical enthusiasm and success had infected obstetrics, and already there was copious proof that more pain and life are, and may be still more, saved by local antiseptic treatment and precaution than by any other known means.

But this great result was not effected by Listerian methods or by absolute antiseptic precautions. Ingenuity and skill had as yet failed to achieve Listerian midwifery. Yet it was intensely desirable, and there was no room for despair.

Fermentation or sepsis in the blood was a very old theory of puerperal fever; and except in cases of manifest putrefaction it had been treated hitherto by antiseptic drugs administered by the mouth, and intended to destroy or modify it. But there was no evidence of any substantial benefit arising from such treatment. The local use of antiseptics, where there was evident nasal evidence of putrefaction was an old method and of very great value. All cases of this kind did not produce constitutional symptoms; when fever did result it was septicæmic, but this name had only recently been applied to it; and it was necessary not to confuse this kind of septicæmia with ordinary or surgical septicæmia, when there was generally no manifest putrefaction. This kind of fever was produced, in Dr. Duncan's opinion, by flowing of the ichor directly into the circulation through open uterine sinuses, or by absorption through a very large surface. This kind of fever was amenable to local treatment by antiseptic methods in a very marked way. Illustrations of success in practice were abundant. The decaying matters were removed by forceps, by the hand, or by lotions, and all these treatments may be vaginal or intra-uterine, according to the position of offending matters. The conditions for examining the interior of the uterus by the carbolised hand Dr. Duncan has elsewhere discussed; intra-uterine lotions were often required. Carbolic lotion, one in fifty, was what he resorted to generally. It must be injected with great care, and used diligently until the putrefaction was arrested. It must be injected very gently, that is, with as little force as would pass the fluid, and attention must be paid to avoid injection of air, and to see that the fluid runs off as fast as it flows in. A pint of lotion was a moderate quantity to use. The last injected should run off quite clean. The injections may be repeated twice daily or oftener, according to the persistence of the putrefaction.

The dangers of intra-uterine lotion, and even of vaginal lotion, were considerable, yet not meantime to be regarded as sufficient to contra-indicate their use in appropriate cases. They contra-indicate their use in ordinary healthy cases, and in such some obstetricians had in their zeal recommended them. There was the danger of propelling the lotion through an open Fallopian tube; but such an occurrence was of extreme rarity. There was the danger of pushing the lotion into the circulation through the uterine sinuses. When carbolic acid was used, carbolic poisoning might be produced of a chronic kind, or of a more acute kind, and of this last a fatal example had been recorded. The symptoms resembled those of embolism, with the addition of insensibility and spasms of limbs and face, especially the latter. The danger of forcing air into the sinuses should be avoided by careful manipulation. The danger of inducing perimetritis and parametritis was not great, and when the diseases occurred they had not produced death, so far as he knew. Hæmorrhage had been induced by the application of this method, but not to an alarming extent.

The great modern development of antiseptics in midwifery was prophylactic. It was in this department that the great successes had been achieved. The prophylaxis was not Listerian, but such modified antiseptic precautions as these had produced great results in surgical as well as in obstetric practice, especially in hospitals.

While ovariotomy could be done with Listerian antiseptics, Cæsarean section could only be done (and should be done) with a zealous attempt to secure them. In Cæsarean section the uterine wound could not be securely protected from dangers from within, just as ordinary labour could not be managed on Listerian principles. In maternity hospitals antiseptic prophylaxis had proved of decided value, rendering healthy what were previously unhealthy. Of course, if autogenetic cases occurred, the antiseptic prophylaxis could not prevent them. But most cases of puerperal septicæmia and pyæmia were certainly not autogenetic. In the Royal Maternity Hospital of Edinburgh Dr. Matthews Duncan had applied this method with results which, though on a small scale, could not be surpassed. He then established the use of carbolic ointment for examinations. Carbolic lotion for all vulvar washings, and cleaning. Carbolic washing for all hands, sponges, and apparatus used.

Prof. Bischoff, of Basle, had used with great advantage much more minute and extensive precautions. These Dr. Duncan described, but expressed no decided opinion on them. He thought such antiseptic cases as he had described should be everywhere regularly resorted to in both hospital and private practice. Many surgeons now believed that antiseptic washings removed all danger of their carrying septicæmic or pyæmic infection from one patient to another. The author believed the same was true in midwifery practice, although he was not as yet prepared to assert it unconditionally as a fact. Putrefaction cases were to be distinguished from ordinary septicæmic cases when there was generally no evidence of ordinary putrefaction. The poison in these last cases was probably always imported into the female system from without. After it had commenced prophylaxis was vain, and there was no good evidence that such antiseptic measures as often cured putrefactive septicæmia would cure ordinary septicæmia. They might be used with advantage where there was an unhealthy state of the intra-uterine surfaces. In putrefactive cases the origin of the disease was generally intra-uterine. In ordinary septicæmic cases this might be so, but there was much reason to believe that the disease originated in wounds of the passages, while putrefactive septicæmia might be inoculated through a scratch. Putrefactive septicæmia is often arrested, almost suddenly, by proper treatment. Ordinary septicæmia was never removed so rapidly. Putrefactive septicæmia had not been shown to have any connection with the labour. Ordinary septicæmia and pyæmia were twice as common in first as in subsequent labours, and in first labour the injuries of the genital passages were greatest. The birth of dead and decomposed fœtuses had been shown, so far as the facts went, not to predispose to ordinary septicæmia. Antiseptic care of the newly born child was second in importance only to that of the mother; and on this the author made some further remarks.

The President, in speaking of the dangers of septicæmia, mentioned a case in which death followed the amputation of the penis, in spite of the greatest care and attention.

Mr. Gant spoke of the philosophical principle which characterised the paper. He asked three questions—(1) whether Dr. Duncan had any notes as to the comparative salubrity or insalubrity of the hospital before and after the treatment he described was introduced? (2) as to the condition of the health of patients under the antiseptic treatment? (3) as to the sanitary arrangements? He thought the singular freedom from pyæmia enjoyed by the Royal Free Hospital was owing to the admirable sanitary arrangements. The great advantage of Liston's plan of water dressing was due to the non-accumulation of matter.

Dr. Sansom thought that the paper illustrated the great advance the doctrine of the germ theory had made in the last few years, and the extraordinary revolution this doctrine has produced. In his opinion the one great hope of the future lay in the treatment after the germ had entered the system, and to this object all our energies must be directed. He asked whether it were not likely that the application of cold to the surface had a real action in preventing the development of the germs? also, whether it was a hopeless thought that we should be able to give internal antiseptics? Polli, of Milan, had introduced the sulphitis, and they had had a certain success. He himself had brought forward the sulpho-carbolates, and lately the salicylates had been introduced. It is a common notion that a sufficiently large amount of an antiseptic cannot be given to an animal without some destructive effect, but he maintained that it could.

Dr. Playfair was inclined to regard the paper as treating of the midwifery of the future. In reference to intra-uterine injections, every one who is at all intelligent knows and can bear testimony to their great value in the treatment of puerperal disease. To Dr.

Braxton Hicks must be assigned the credit of being the first to insist on their importance, and this was before antiseptic treatment. In several hundred cases in which he had employed intra-uterine injections he had never met with any of the risks mentioned by Dr. Matthews Duncan. For his part he would suggest the advisability of washing out the uterus whenever there was a rise of temperature or other symptoms of puerperal mischief; he prefers to use a weak solution of iodine or Condy. He regarded the tendency of the author to minimise the dangers of carrying infection to puerperal patients as most unfortunate. He (Dr. Playfair) did not believe that a medical practitioner who has to wash out the uterus of a patient with puerperal fever should attend another case of midwifery at the same time. The hair, breath, and clothes will convey the infection, and washing the hands in carbolic lotion is not sufficient. In private practice he had long made it a rule that patients should have an antiseptic injection daily. Every student at King's College is obliged to wash his hands in carbolic lotion before attending a case.

Dr. **John Brunton**, in alluding to a case recorded as a confession in the 'British Medical Journal,' in which a patient contracted puerperal fever from dirty forceps, thought that hitherto sufficient attention had not been paid to the condition of these instruments. From the handles being made of wood after a time there is a tendency to their separating from the shafts, the chink thus formed being cleaned out with difficulty. In his opinion it was better to have the instrument of one metal and plated, and he exhibited a pair of forceps he had had in use for upwards of twelve years.

Dr. **Heywood Smith** asked Dr. Duncan as to the best practical way of carrying out antiseptic treatment as regards the child? He mentioned a case in which the child died from absorption of pus through the umbilical cord. Dr. King maintains that the cord falls off more easily if it be torn rather than cut through, and then the end should be powdered.

Dr. **Lee** proposed, Dr. **Sansom** seconded, and it was carried, that the discussion be prolonged for half an hour.

Dr. R. J. **Lee** asked from what does this poison originate? If in general it is introduced from without, then it is due to the carelessness of the medical attendant or nurses; if from within, then no such imputation can lie. It would be interesting to learn from obstetricians how often one or the other is the case. With regard to the comparative immunity of dissecting-room students, he was inclined, from his experience at St. George's Hospital, to think there was considerable danger.

Dr. **Routh** stated that there are some signs by which puerperal fever originating in the two modes before named can be distinguished. In the septic form, which he saw largely generated by the students at Vienna, the milk was never suppressed, though the child was often killed by it in six or eight hours with the symptoms of narcotic poisoning; the lochia also are not suppressed. In the autogenetic form, which chiefly prevails in the country, there is generally stoppage of the lochia and milk. He considered that lessened barometeric pressure was one of the factors in the production of the disease.

Dr. **Dewar** asked what measures should be taken in a small house, where a woman who had recently been confined was lying in a room adjoining to which there is a patient suffering from scarlet fever.

Dr. **Matthews Duncan**, in reply, said that Mr. Gant had not sufficiently distinguished between Listerian antisepticism as applied to general surgery as opposed to midwifery. The revolution in continental hospitals is due to transcendental cleanliness, and not to the practice of antisepticism. In answer to Dr. Sansom, he thought that long before the bacteria had been destroyed by the lowering of the temperature, the patient herself would have been killed. There was in his paper nothing discordant with the views of Dr. Playfair, and it would be found that he (Dr. Duncan) would take equal care; but what he did decline to do was to lay down laws that would practically debar medical men from practising, or would render them liable at any moment to a criminal indictment. To follow out Dr. Playfair's view to its logical conclusion no man could practise and enter a hospital, or having seen a case of scarlet fever, or erysipelas, he would be required to abstain from practice for six weeks; he prefers to leave the matter to the unwritten law of the conscience. He had never known any one who had given up attending midwifery on account of puerperal fever. In answer to Dr. Heywood Smith, he stated that putrefaction of the cord may be arrested by carbolic lotions. In his paper he had abstained from theoretical views, but in his opinion most cases of puerperal fever arose from without, but he must emphatically contradict the error that danger cannot come except from nurse or physician; he has known many nurses and medical practitioners killed by patients, but he has not known patients killed by their medical attendants or nurses. Listerism is founded on the belief that the danger comes from the atmosphere, and the same is true of midwifery. For his part he could not continue the practice of his profession if he thought otherwise. He has never seen evidence to prove that dissecting-room students, as opposed to post-mortem students, carry infection. He could give no satisfactory answer to the last speaker except to advise him to thoroughly grease his scarlet fever patient.

February 17*th,* 1879.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Mr. Lennox Browne read a paper entitled

CLINICAL OBSERVATIONS ON LARYNGEAL STENOSIS.

Deprecating the too general limitation of the term to narrowing due to web-like formations the result of traumatic injury or of syphilis, he remarked that very serious constriction was quite often due to neurosis or to infiltration without any removable new growth. Three cases were related in detail:—1, was one of that comparatively rare affection bilateral paralysis of the posterior crico-arytenoidei, of catarrhal origin; 2, one of subacute infra-glottic infiltration, due to syphilis; 3, one of chronic hypertrophic inflammation, with occasional relapses of subacute œdema, also specific in its nature. In the first case the patient when first seen was suffering from extreme dyspnœa, and treated for ten days with 20 gr. doses of iodide of potassium, and 10 gr. of the bromide, every six hours, also with 5 gr. of grey powder nightly. Concurrently inunction was made over the larynx with a mercurial, iodine, and belladonna ointment, and frequent vapour inhalations taken. Further, faradisation was tried, but the dyspnœa and spasm continuing tracheotomy was determined on, but the subcutaneous injections of $\frac{1}{30}$th of a grain of strychnia having been tried over the larynx with good result the operation was abandoned, and a simple tonic mixture with 5 minims of solution of strychnia was given, the inhalations being continued, and the hypodermic injections were made daily for five weeks, being gradually increased to $\frac{1}{15}$th of a grain, while during the last three weeks half grain of ergotine was added to each injection. The result was satisfactory, for although the patient was not cured she was able to do the house work, and felt herself so well that it was difficult to make her keep the punctual attendance necessary to complete the cure. The second case was relieved promptly by frequent doses of iodide of potassium, and steam inhalation with compound tincture of benzoin. Since subsidence of the acute attack perchloride of mercury had been steadily administered to prevent recurrence. A similar treatment had been pursued in the third case, which had been under observation three years. On two occasions the patient had been obliged to seek relief at the hospital nearest to her dwelling on account of urgent dyspnœa, and tracheotomy had each time been contemplated. In this case, in addition to medical treatment, cotton-wool tampons, on handles, charged with suitable mineral astringents, had been introduced well through the glottis with much benefit. Many interesting clinical points affecting the question of diagnosis and treatment were dwelt upon, and amongst others it was mentioned that this was the first case in this country, reported, of treating bilateral paralysis of the abductors by means of strychnia injections.

The particular point urged was, the importance of not performing tracheotomy until every medical means has been tried, since, highly valuable as this operation was in many acute diseases as well as for prolonging life in incurable affections, such as cancer, perichondritis, &c., it was thought that in the cases under consideration, the procedure was but too often a bar to further efforts at cure; first, because both patient and doctor were apt to be content with having removed all urgent danger, and secondly, because, spite of every precaution by means of openings in the upper surface of the canula per valves &c., the tendency was always for the larynx to close above the artificial opening, while such measures as hypodermic injections, faradisation, and the like, could not be well carried on with a tube in the throat.

It was observed that every operation for the removal of webs in the larynx, the result of cicatrisation after cases of cut-throat, had been followed by re-formation of the web.

It was needless to point out how much more likely was this to occur in cases of a syphilitic character. While thus deprecating attempts at splitting or cutting away these webs, Mr. Lennox Browne suggested that in certain cases of limited perichondrial disease it might be possible, having performed tracheotomy, to cut down and remove the carious portions.

Dr. **Woakes**, in answer to Mr. Browne's remarks about conservative surgery, said that in many cases tracheotomy is a question of Hobson's choice, you must perform the operation or lose the patient; tracheotomy is oftentimes a most useful adjunct to general treatment. You cannot give the larynx physiological rest so long as the patient breathes through the glottis; but it has often been observed that immediately after the operation, no other treatment being employed, a great improvement in the laryngeal disease has ensued.

Dr. **Gilbart Smith** asked in what form galvanism had been used, and the dose of the iodide of potassium that was given. Case 1 appeared to him to be of syphilitic origin; he agreed with Dr. Woakes as to the importance of tracheotomy in some of these cases.

Dr. **de Havilland Hall** objected to the percutaneous use of faradisation in the treatment of paralysis of single muscles. When the crico-arytænoidei postici are affected, the electrode should be passed down the œsophagus, so as to be in actual contact with these muscles.

Dr. **Sémon** mentioned that he had seen seven cases of paralysis of the abductors. No certain rule can be established in these cases, but every case must be treated on its own merits. The hypodermic use of strychnia, and large doses of the iodide of potassium have been most efficacious. He agreed with Mr. Lennox Browne that it was better to try milder procedures at first, but the operation of tracheotomy should not be postponed too long on account of the grave changes that are likely to arise in the lungs. In one case the patient died during the operation; this having been deferred, owing to the opposition of the patient. The result was due to carbonic acid poisoning.

Mr. **George Brown** said that the patient was under his care before he sent her to Mr. L. Browne, and that he had subjected her to a thorough anti-syphilitic treatment without any amelioration of the symptoms which, on the contrary, rather increased in gravity.

Mr. J. **Astley Bloxam** asked if the patient had been placed sufficiently under the influence of mercury to touch the gums.

Mr. G. **Brown**. No.

Dr. **Dowse** inquired whether any sugar had been detected in the urine. He regarded the case as one of neurosis, for in addition to the laryngeal paralysis, there was impairment of the power of deglutition. Was there any history of diphtheria?

Dr. **Leared** asked whether it would not have been possible to have inserted a tube between the cords into the larynx; he mentioned a case of apparent death in a dog from chloroform in which he had resuscitated the animal by passing a tube into the larynx and employing artificial respiration.

Mr. **Lennox Browne** in reply said that he quite recognised the value of tracheotomy in giving functional rest. Twenty grain doses of iodide of potassium had been given every six hours for ten days. In regard to faradisation, one pole had been applied externally and one in the œsophagus. He did not believe this case was due to syphilis. He would be afraid to try catheterism in these cases of spasm.

The **President** thought it was a pity that more attention had not been directed to the diagnosis of the causation of these cases as it would be of great assistance in treatment.

Dr. **Drysdale** then read a paper entitled

SYPHILITIC URETHRITIS AND VAGINITIS.

He observed that at this moment there was no distinct doctrine admitted by all as to the lesions which might produce syphilis in the healthy subject. Pearson, followed by Mr. Henry Lee, maintained the views of John Hunter, and alleged that gonorrhœa or urethritis even in the male sex is occasionally specific in character, and capable of proving contagious. Of syphilis, Ricord had laid down that gonorrhœa in the male was never syphilitic unless there was a hidden sore in the urethra, but H. Lee was by no means of this opinion alleging that such hidden chancres were almost, if not wholly, unknown. The well-known experiment of John Hunter, who produced syphilis on himself by inoculation with the secretion of an ordinary-looking gonorrhœa of one of his male patients, was cited as one of the most important and convincing experiments ever made to show that gonorrhœa even in the male is occasionally one of the secondary symptoms of syphilis. As to Ricord's plates in his well-known work, which tend to show that there had been urethral chancre in two cases of gonorrhœa, it was not at all clear that the appearances figured were due to chancre of the urethra. In the female the author was convinced that erythema of the walls of the vagina and uterine catarrh were often symptoms caused by the syphilitic poison, and he gave cases to illustrate this where women, apparently quite free from anything but leucorrhœal discharge, had communicated syphilis to men. At the Rescue Society's Lock Hospital he had often noticed the supervention of vaginitis and uterine catarrh in syphilitic young women after a prolonged stay in hospital, where these came on evidently as one of the symptoms of syphilis, just as a stomatitis or slight syphilitic patches are seen in the mouth and fauces in secondary syphilis. In the male such erythema and mucous patch, doubtless, were often the cause of urethritis, and simulated non-syphilitic or ordinary gonorrhœa. Mr. H. Lee had narrated cases of such gonorrhœa which were only cured when specifics were finally had recourse to; and it was very important in medico-legal cases to remember that a husband or wife, who had years ago had secondary syphilis, might contaminate their partner with syphilis, if afflicted with such apparently simple gonorrhœa or leucorrhœa, without pregnancy being induced. He related one example. If such facts were not taken into account it might be said that the contagion had been recent and had occurred after the marriage contract, and thus many penalties might be inflicted on an innocent person. There was a great want of unanimity at present as to what was the primary lesion of syphilis. Mr. Jonathan Hutchinson affirmed in London "that dualism was dead," whilst Dr. Alfred Fournier, in Paris, affirmed that the unilist views were defunct in Paris. Truth could not exist in such contradictory opinions; and he believed with Fournier, Lee, and Bassereau that soft chancre had no more to do with syphilis than measles had with scarlet fever.

To sum up, Dr. Drysdale said that the "contagious diseases," so-called, were divisible into the hard sore and syphilis, the soft chancre, and simple gonorrhœa, with the addition of another sore, producible occasionally in syphilitic persons by inoculating them with syphilitic matter. Gonorrhœa might occasionally be a symptom of syphilis and soft sore in males or females, and when obstinate slight specific treatment might be tried with iodide of potassium or perhaps mercury when all other remedies failed.

February 24th, 1879.

Erasmus Wilson, F.R.C.S., F.R.S., President, in the Chair.

Mr. Royes Bell made the following communication, and showed the patients.

Case 1.—A. C—, æt. 7, a boy, suffering from genu valgum, admitted into King's College Hospital; a delicate child affected with rickets. Had attended for some time as an out-patient, and was ordered tonics, but ceased his attendance on account of inability to walk. When Mr. Bell heard of Ogston's operation he determined to try its effect in this case. (Photograph shown before operation.) Both femurs are seen to be much bowed, the tibias also much bent, and he crouches rather than stands, which he cannot do without support. The operation consisted in dividing the internal condyle at its junction with the shaft of the femur and in the inter-condyloid notch, and this is done by passing a narrow-bladed knife through the soft part, just where the condyle takes its rise from the femur, and carrying it into the joint to the inter-condyloid space, and so making a passage for a narrow blunt-pointed saw. It is well when passing in the knife to draw the skin forward at its point of insertion, as recommended by Mr. W. Adams, as it steadies the knife, and is useful in finishing off the sawing of the compact tissue of the condyle. When the condyle is sawn through it will be felt to move in the femur, and the limb can then be forcibly straightened, and put up in a back splint to keep the knee straight, and an outside one to correct the bending inwards of the knee. The operation was performed on the 6th July, 1878, and the boy discharged on the 18th August (forty-three days); it was done antiseptically. His temperature never exceeded 100°, neither did he suffer any pain or constitutional disturbance. In the second photograph (shown) he stands without crouching, the feet are not curved inwards, although the left leg is somewhat knock-kneed; he can now walk well, and goes to school.

Case 2.—M. H—, a girl, æt. 5. Suffered from well-marked genu valgum of the right knee-joint. The condition of things is well seen in the cast (shown). The internal condyle was separated, and the tibia placed in a straight line with the femur.

Case 3.—W. B—, æt. 11. Cast of his right leg shown. He suffered from rickets and a severe form of genu valgum of the right knee. The internal condyle was divided completely by the saw sent round. The condyle could be moved, but the leg could not be straightened as in the preceding cases. The limb was put into splints, and as the author did not wish to divide the external lateral ligament, but to try whether the limb could not be straightened by means of traction, applied so as to draw the knee outwards; this he found difficult to accomplish, as the foot was awkwardly placed (talipes valgus), but the house-surgeon (Mr. Hugh Smith) fitted a foot-piece to a Liston's long splint, which was applied to the outside of the limb; this, with a splint behind, improved matters somewhat. The author did not succeed, however, in getting the limb as straight as in the other cases, although he divided the internal condyle completely, and, as he thought, in the proper line. The boy gets about well now, and if the use of the splints be persevered in the limb will continue to improve. He remarked that these were not only cases of genu valgum, but were also associated with a severe condition of rickets. When the ligaments *only* are at fault much may be done by instrumental means, but when the *bone* is altered by an excessive development of the internal condyles an operation is necessary. These hospital cases when discharged are seen no more unless advice is needed for some after complaint. Mr. Bell commented on the difficulty the operator had to contend with in the carelessness of many of the patients in the proper application of the splints supplied, and observed that the left leg of the case of double genu valgum is not so straight as it was when the boy left the hospital; and as these cases generally possess a bad family history, the cause of the cure not being complete is not difficult to find. In none of them have the movements of the joints been interfered with, and all have been treated with antiseptic precautions.

Mr. W. Rose, after a short reference to the pathology of genu valgum, in which he stated that it was now generally acknowledged that the enlargement of the internal condyle was the real seat of the mischief in aggravated cases, proceeded, by means of diagrams, to demonstrate the various operations which had been adopted for the correction of the deformity. Referring to a wooden model he showed the manner in which the internal condyle was displaced upwards after being divided with a saw through a valvular opening in the skin above the inner side of the knee according to Dr. Ogston's operation. Mr. Rose then compared the use of the chisel with that of the saw, and gave reasons for his preference for the latter instrument, chief among which was its greater precision. He showed a knee-joint in which he had sawn through the internal condyle on the dead subject according to Ogston's method, in order to demonstrate the fact that the saw cut did not interfere with the crucial ligament in any way whatever.

He also exhibited two patients aged four and ten years respectively in whom he had successfully divided both condyles simultaneously for double genu valgum.

Mr. Henry Smith also exhibited a patient on whom he had performed a similar operation at the left knee.

Mr. Pearce Gould showed an in-patient from the Westminster hospital, æt. 18, with severe genu valgum and great over-growth of internal condyles; he divided the internal condyles subcutaneously by the chisel on each side, and then finding it impossible to straighten the limbs he divided the biceps on each side. He stated that on another occasion rather than use the violence he found necessary in this case he would divide with the knife the external lateral ligament.

Mr. W. Adams regarded this as one of the most remarkable of modern operations and a further extension of subcutaneous surgery which he practised in 1869, when he cut through the neck of the thigh-bone subcutaneously. The great thing in this operation is to adhere to the principles of subcutaneous surgery. Six months ago he had a letter from Dr. Ogston, informing him of thirty-eight operations; now they must number at least 100, and with the exception of a case at the University College Hospital, there had been no fatal result. With regard to the instrument used, no doubt but that the preference will be given to the saw, which is an instrument of great precision. Sawdust is a myth, no harm ever results from it. Slight cases of knock-knee will yield to mechanical treatment, but the treatment required is long and unsatisfactory; moreover, the patient is liable to relapse, so that if these cases can be cured by an operation *nearly* as harmless as tenotomy, then a great advance in surgery has been made. The cases shown admirably illustrated all the propositions formulated.

Mr. Edmund Owen remarked that it was of importance to remember that (with the exception of Mr. Gould's case) all the patients exhibited were young children with rickets; the genu valgum being a secondary condition. Without doubt each child would have greatly improved after six weeks' rest and feeding in the hospital, together with the splintering which had been in each case adopted, and without having undergone the cutting operation. In explaining the pathological anatomy, Mr. Owen stated that the internal lateral ligament was the first structure to give, then the internal tuberosity of the tibia dropping from beneath the internal condyle of the femur allowed an unimpeded elongation of the femoral condyle, whilst the extra pressure brought to bear upon the external condyle arrested its growth. By firmly fixing the limb against an outside splint, the converse of these conditions could in time be induced. In Mr. Owen's opinion, the question was, Is any cutting operation justifiable in the treatment of knock-knee in patients of such tender years?

Mr. ROYES BELL asked whether Mr. Owen would undertake to straighten the limbs in a case similar to the one he showed.

Mr. J. ASTLEY BLOXAM thought the operation rather unjustifiable at so early an age. He had seen cases quite as bad as some of those shown which had yielded to mechanical treatment. In one case there appeared to be a return of the deformity after the operation. Moreover, the duration of the after-treatment was considerable.

The PRESIDENT remarked that only successful cases had been shown to-night; perhaps on another occasion we may see those which have not succeeded.

Mr. ROSE thought that his view of the pathology of these cases was the same as Mr. Owen's. Could Mr. Owen show that mechanical treatment was capable of causing absorption of the elongated internal condyle? He had had one case at the age of nineteen, which was quite successful. In a recent letter to him, Dr. Ogston mentioned seventy cases. The only unsuccessful cases he had heard of was that at University College Hospital, in which death occurred from pyæmia. He believed the operation would be more generally adopted.

Mr. GOULD agreed that there was doubtless, as Mr. Adams said, a great temptation to practise this operation rather than going in for the long mechanical treatment. If pressure were taken off the external condyle by stretching the ligament, it will grow as the internal did. He had seen a case in which this operation was done eleven weeks ago, and the limbs are now pretty much in the same condition they were before the operation, except that the knees are stiff. Great care is required in the after-treatment. Some of Mr. Reeve's operations are most admirable, and the prevention of wounding the synovial membrane is most important.

Mr. Jabez Hogg then showed some

SPECIMENS OF ARSENICAL AND OTHER WALL PAPERS,

with microscopic illustrations of arsenic which had volatilised from dresses, paper, &c.

Dr. Bartlett said that, as a chemist, he had had great experience of arsenical poisoning; these cases frequently occurred; in the last ten or eleven years at least 150 instances had been brought under his notice. Many other substances besides wall papers contained arsenic, such as dress, artificial flowers, and articles of furniture. Eight or nine tons of arsenic pass through the customs every week. The finest colouring matters, and those most approved of by ladies in their dresses, &c., contain this mineral, and where it is not he knew not.

The President said that, in the village of Whitwick, the river running through it was so impregnated with arsenic that fish and ducks could not live in it. The inhabitants, however, had no other to drink, and it had been remarked that the finest horses were those employed in that neighbourhood. Strangers were for a time upset by its use, but soon recovered. He regarded arsenic as a nutritive neuro-tonic in skin diseases.

Dr. Lauder Brunton said that, a year ago, he held the opinion that the subject of arsenical poisoning was much exaggerated. He put up arsenical wall paper (the manufacturer having stated that it was entirely free from arsenic), and in forty-eight hours he had dysentery and was like to die, and it was months before he recovered. He arrived at the cause of his illness by a process of exclusion, and on having the paper analysed it was found to be largely impregnated with arsenic. In reply to a question from the President as to whether he had ever tried it internally, Dr. Brunton said he had taken it himself as a tonic; the form in which it is taken is the reason of the difference in its action.

Dr. Bartlett stated that small quantities affect him when volatilised from paper, whereas he can take large medicinal doses with impunity.

March 3rd, 1879.

ERASMUS WILSON, F.R.C.S., F.R.S., President, in the Chair.

The ballot for the election of Officers and Council for the ensuing year was opened at 7.30 p.m.

The ballot was closed at 8.30 p.m., and Dr. Lovejoy and Messrs. Gould and Richards were appointed Scrutineers.

The Honorary Librarian read his Annual Report.

The Treasurer presented his Report and Accounts for the past year. This was received with general satisfaction, and the resolution of the Council that the Silver Medals of the Society be given to (1) Mr. J. Astley Bloxam, and (2) Dr. C. Theodore Williams, for special services, gave much pleasure to the Fellows.

The Honorary Secretary read the report of the Council for the past Session.

The subject for the Fothergillian Essay for March, 1881, was announced: "The Relative Value of the Various Antiseptics in their application to Medicine and Surgery."

Mr. THOMAS BRYANT then read a paper on

THE VALUE OF OPERATIVE INTERFERENCE IN THE TREATMENT OF THE INFLAMMATION OF BONE.

The author divided his subject into three parts, and illustrated each by quotation of cases:

1. On drilling and trephining bone the subject of chronic inflammation.

2. On trephining or making a free opening into bone the subject of suppuration.

3. On operative interference in acute periostitis and endostitis.

In the first part the author admitted that the operation of dividing longitudinally by a saw, or of trephining bone which is the subject of chronic inflammation, has been practised at intervals by surgeons for many years, although it has hitherto been confined to three classes of cases, viz. (1) to those in which relief has not been obtained by other treatment persistently applied; (2) to those in which, from the persistency or severity of the pain, surgical interference is demanded; and (3) to others in which an abscess in the bone was suspected, but chronic inflammation was alone found; and yet, he added, if the principle on which the practice is based be right, the operation should have a wider range; for, granting that the division or trephining of a bone chronically inflamed relieves tumours, gives exit to inflammatory fluids, lessens pain, and cures disease in such obstinate cases as have resisted all other modes of treatment, it is not unfair to infer, if the same or an allied practice were applied at an earlier period of the inflammatory affection, that equally good results would be obtained, and that while in some cases the inflammation would be checked by the operation, in many an early and complete recovery might be anticipated.

Four cases were then quoted at length. In the first the cure was complete, the disease having been arrested in its early stage by simply drilling the head of the tibia before it had involved the joint. In the second the trochanter major was trephined and drilled, and the operation was followed by recovery, the disease undergoing in the bone a cure, by resolution, and in the hip-joint by anchylosis, the affection of the joint having existed some time before the operation was performed. In the third example, the patient being middle-aged, the newer operation of drilling the bone was chosen as a tentative measure with the hope that it might have proved sufficient, but as it failed to give relief, trephining was had recourse to, and with such success as to relieve pain and arrest the progress of the disease.

The patient subsequently recovered, though with a stiff hip-joint. In the fourth case the relief which the operation of trephining afforded was very striking and ~~the case~~ subsequently did well.

In the second part, when the treatment as applied to suppuration of bone was considered, the author referred to a quotation which he had taken from John Hunter's manuscript lectures, and had given in his 'Practice of Surgery,' vol. ii, p. 409, from which he said, "It must be unquestionably admitted as a fact that surgeons were in the habit of using the trephine in cases of suppuration in bone in the time of John Hunter, although in recent times the credit of introducing the practice has always been attributed to Sir B. Brodie."

That the practice is good, he added, no surgeon now doubts, although it may be a question whether it is followed as freely as it might be.

The cause of the neglect is probably due to the difficulty of diagnosis, and the fear in the mind of the surgeon of not finding pus in the part perforated; most practitioners having still a dread of opening a part in which pus may be suspected without finding it. This error, however, he believed would disappear if the lesson he had attempted to convey in the preceding part of his paper were recognised, and if it were generally admitted that the operation of drilling or trephining bone the seat of a chronic inflammation was as beneficial as it is known to be when suppuration exists. He then quoted four cases to illustrate the practice.

The third part of the paper dwelt on the value of operative interference in acute periostitis and endostitis, and some interesting cases were given, one being of what has been described as hæmorrhagic periostitis.

The following conclusions were then drawn:—That in acute periostitis or endostitis a free incision down to the bone, by relieving tension and giving exit to inflammatory effusion, does nothing but good, and that it should be made as early in the progress of the case as the diagnosis will justify, and if possible, before pus has formed. The very commonly fatal termination of these cases by blood-poisoning, when they are left to run their course undetected, rendering this measure imperative. That in all forms of endostitis or osteomyelitis of long bones, in which more or less intense and persistent pain is a prominent symptom, the operation of drilling, trephining, or making a free opening into the bone should be entertained, as any one of these measures tends to check the progress of the disease and in most cases relieves pain.

In flat bones, such as those of the head, and in cases in which the preceding measures seem too severe, the simpler operation of cutting down upon the bone and separating the periosteum from it, should be performed.

That in all cases of suspected disease in bone the same operative proceedings should be carried out. The operation of trephining inflamed bone suspected to be the seat of suppuration being generally as successful in relieving pain and effecting a cure, as it is well known to be when a local abscess in bone is found to exist.

The President, after alluding to the admirable character of the paper, said that one of the most striking features in cases of inflammation of bone was the persistent pain, obviously not due to rheumatism or neuralgia.

Mr. J. **Astley Bloxam** asked whether in cases of chronic osteitis due to the scrofulous diathesis any operative procedure should take place, because if it be undertaken the disease seems to spread. The case is different when the operation has been performed after inflammation due to injury.

Prof. **Lister** said that the principal point in the treatment of inflammation of bone was as to the value of an opening into the bone when there is a doubt as to whether there is an abscess or only inflammation. When house-surgeon to Mr. Syme he saw a case operated on, and though no pus escaped great and immediate relief followed. The success of this case has ever influenced his treatment. With the gouge and hammer a broad ditch should be made down to the diseased bone, and he has not met with any disadvantage, especially since he has used "antiseptic surgery." Pyæmia is prevented, and the case expedited by the use of antiseptic precautions. He then proceeded to give particulars of a case illustrating these statements. The whole tibia from knee to ankle was the seat of pain, the leg being dotted over in all directions from the hypodermic use of morphia. With the gouge and hammer an opening was made in the upper part of the bone with antiseptic precautions, the diseased structures were removed, and a considerable cavity left. Healing, however, took place without suppuration; pain returned in the lower part of the bone, and on again using the gouge the blood-clot produced by the former operation was found to be organised and more or less bony.

Another case.—A girl in her teens was admitted into the Edinburgh Infirmary with a sinus, presumably due to necrosis. On cutting down it was found that the whole bone had been expanded, and that the canaliculi were infiltrated with pus—chronic osteo-myelitis. Under antiseptic precautions with gouge and hammer he removed all the spongy tissue, leaving little but periosteum. The cavity became filled with blood, and the whole of the clot organised, so that eventually the scar was flush with the surface. Prof. Lister thought that even if the spray was not used, at all events the wound might be treated with antiseptic lotions. Antiseptic treatment is of especial value in the neighbourhood of joints. He illustrated this by mentioning a case in King's College Hospital. There was acute necrosis of the head of the tibia. . On cutting down the knee was found to be full of pus. Without antiseptics amputation must have been done. The patient, however, has retained his knee, and may possibly get movement. In another case, in which he made incisions into the knee-joint, the patient recovered with movement.

Mr. **Royes Bell** mentioned a case which he saw before antiseptic surgery had been brought under his notice. Acute necrosis of the tibia had been going on for only a day or two. On making a free incision he found that the periosteum was stripped off. He would, therefore, insist on the importance of early operation. In this instance the whole of the bone necrosed, and the patient was for a long time in hospital. He also mentioned a case in which the knee-joint was opened as there was evidence of pus, and though not done antiseptically the patient has a movable joint. Under the old plan clots always used to suppurate instead of becoming organised, as Mr. Lister has shown.

Mr. **Gould** gave particulars of several cases in which great relief from pain and other benefit had resulted from the early incision into the diseased bone. He mentioned three cases under Mr. Macnamara's treatment in the Westminster Hospital. In one there was disease of the ankle-joint and inflammation of the lower end of the tibia. Mr. Macnamara drilled a hole through the bone, and passed a horse-hair suture through it. Great relief to all the symptoms followed. In another there was inflammation of the upper end of the tibia. This was similarly treated, and with equally good result. The third case was a girl, æt. 13, who in September last fell on her right hip, the injury being followed by the usual signs of hip disease. Six weeks ago she was put under ether, and Mr. Macnamara passed a double gouge right through the trochanter, neck, and head of the bone into the joint so as to allow a free drainage. Relief was immediate and great. He also mentioned a case of an abscess bursting into the knee-joint treated by free drainage and without antiseptic precautions, and yet perfect movement followed.

The **President** said he supposed that when the bone affection seemed to be of constitutional origin surgeons always adopted medical treatment to affect the system before having recourse to operative procedures.

Mr. **Bryant**, in reply, stated that he agreed with Mr. Bloxam's criticism that strumous cases do not respond well to operative measures. The treatment should, therefore, be applied earlier. As regards the organisation of clot, which Mr. Lister claims as the great advantage of his system, Mr. Bryant mentioned a case of chronic osteitis of the tibia in which the whole of the diaphysis was involved. He gouged out the bone, leaving only a shell, covering up the wound with the compound tincture of benzoin. No elevation of temperature or other unfavorable symptom followed. Two or three weeks later, on removing the dressing, it was clear that whatever had been effused was undergoing organisation. The whole thing closed up and consolidated. He mentioned the case of a boy, æt. 14, who fell on the left knee. Intense pain with acute inflammation followed. As the bursa was evidently inflamed he opened it; this relieved the pain for a time. The pain, however, returned, and it was then found that there was a comminuted fracture of the patella. A drainage-tube was used without the spray, and the boy eventually made a good recovery. The cases brought forward by Mr. Gould would greatly help to strengthen and support his view.

March 8th, 1879.

The DINNER, celebrating the 106TH ANNIVERSARY, was held at the Criterion Restaurant.

ERASMUS WILSON, F.R.C.S., F.R.S., President, in the Chair.

March 10th, 1879.

JOHN COCKLE, M.D., F.R.C.P., President, in the Chair.

The PRESIDENT delivered the following address: Gentlemen,—It would seem a time-honoured custom of the Society for each newly-elected President to inaugurate the session by a short introductory address. I would not willingly depart from the custom were it only for the opportunity it affords of tendering my warmest thanks to the late Council for nominating me, and to the Fellows at large for approving the nomination. To preside over so cultured an assembly must be a high and coveted honour. To your great kindness I owe the realisation of wishes and aspirations long cherished, though ever chastened by the reflection that I might, for a time, keep abler men from sitting here. Indeed, when I look over the names of the distinguished men on the roll of the Society who have preceded, and think of the equally distinguished men who will succeed me, some sense of misgiving will intrude less future comparison should show how relatively limited my power of usefulness may have proved. Still, there are official duties that may be performed, and with some reasonable hope that they may be successfully performed. To consult your interests and wishes will at all times be my earnest endeavour, and should I ever fail in reading those wishes aright I must ask you at all events to believe in my desire to anticipate them. Passing now from merely personal topics it would have been a graceful task for me to have set forth the good work done in the Society during the past session, but this subject will have fuller justice done it by other hands. I have on this occasion no original remarks to offer; indeed, with so many mental forges incessantly at work it might be more than hazardous for any one in any science to deem his work original until its originality has stood the test of inquiry. But I can now speak of original work that has been done by others, and which it seems to me specially opportune to make my theme, connected as it is with eminent members of this Society, and promising as it does to prove of incalculable value to the medicine and surgery of the future,—I mean the localisation of cerebral function and of cerebral disease. These labours have largely helped to reduce what was a chaos to order by throwing light upon certain functions of the cerebral cortex heretofore unguessed. If we glance through the historic period we perceive how great were the gaps left, from the very difficulties then inherent in the subject, in filling in even an approximately correct theory of the workings of the brain, regarded as the seat of the higher faculties. From the time that Erasistratus affirmed the convolutions generally to be the seat of the intelligence, but little was added really worthy of remark until Boerhaave, in his admirable lectures upon the nervous system, threw out the conjecture that the brain might be regarded as divisible into separate areas, and that each area might be regarded as the seat of a specific function. In the prophetic insight of this great physician there were apparently few believers. The current of thought still ran in the old channels, and even so late as the time of Flourens the brain was considered to act as a whole. Recently, however, a note having the ring of original experimental research was struck in Germany by Fritsch and Hitzig, and echoed on among ourselves, stimulating Dr. Ferrier to his valuable and successful inquiries. It is, however, the fate of all discovery, in whatever science, to have to face objections of various grades. First, there is to be encountered the unreasoning scepticism which from invincible mental ignorance decries innovation upon traditional teaching. Such, for example, was the attitude assumed towards the discoveries of Harvey and Laennec. Next there is to be met the reasoned scepticism, which demands a higher degree of absolute verification than can at the moment be afforded. A last objection arises, perhaps properly at times, from the tendency of original inquirers in the first flush of discovery to generalise too quickly the results obtained. It may be well, perchance, that such objections should be urged, for in proportion as they lose their force we may all the more clearly discern how great is the conquest that has been achieved, how a real and most important addition has been made to current knowledge, an addition sufficient to secure a reputation as lasting as deserved, and more than sufficient to justify the natural pride that must be felt by all these brilliant pioneers, native and foreign, in the obscure path of cerebral science. We may then accept this experimental result, viz. that a cortical motor area exists, embracing the tract from the fronto-parietal region to the basal ganglia, both inclusive, as now established upon a solid basis. Other areas may, according to Ferrier, be in intimate connection with special sense. The fronto-parietal zone may be regarded as the almost special zone of convulsion and paralysis. The pre-frontal and occipital regions, whatever else may be their function, seem incapable of originating either condition. Dr. Peitres, a disciple of the school of Charcot, has in his recent work specially insisted upon the immunity of these districts from convulsion and paralysing influence. I do not, however, feel quite assured that all his cited cases perfectly support the proposition he enunciates. The experimental *data* furnished by the fronto-parietal region find strong and independent support from histological research. In this region peculiar cells of giant size, somewhat resembling the large motor cells of the anterior cornua of the cord, mainly abound. Lastly, clinical and pathological observation also plead forcibly in favour of the experimental results. Indeed, these results have, I may say, been anticipated in a sense by Dr. Hughlings Jackson. Again, how much of clear insight into the action of groups of muscles involved in paralysed parts do we derive from the very original reasoning of another most valued Fellow of our Society, Dr. Broadbent. But in order to satisfy us, we require the results of experimental inquiry into the functions of the brain cortex to yield practical advantages. We must henceforth be as thoroughly familiar with the position of the accessible convolutions considered in their relations to given portions of the skull, as we are with the position of the organs occupying the thoracic and abdominal cavities, or of the great landmarks afforded by the bony and other structures of the body. The same topographical knowledge must also be required of the surgeon if he is to resort with success to a much more frequent use of the trephine. And should the surmise of Dr. Ferrier hold good, viz. that the diseased area of the cortex may be often indicated by the pain induced on percussion of the corresponding portion of the skull, an additional sign of value would exist. But, gentlemen, great and valuable as is the discovery of a cortical motor area, it forms but a part of the great problem of localisation that the future has to solve. Much unbroken ground yet remains, not, perhaps, to be successfully worked until a better knowledge is obtained of the minute anatomy and physiology of both brain and cord. I indulge a hope that some portion at least of the honour yet to be won may fall to the lot of many among us. But, while duly estimating the importance of studying the organic seat of function, we must not omit some reference to that wondrous energy whereof the brain is supposed to be the material organ. While mind was regarded as a simple indivisible, unextended entity acting in some mysterious manner through its material organ, it was manifestly impossible to span the gulf that actually separated mind from matter. Thus mind remained the almost exclusive monopoly of the several schools of philosophy. But with the advance of physiology it was perceived that there was a concomitance between cerebral and mental changes; and soon the physiologist asserted his claim to a hearing. Nervous molecular change conveyed to the ganglionic cells and a concomitant mental change became ascertainable facts. Here are two events taken to be concomitant, paralleled, correlated; yet can we say that they are necessarily connected? or if so, do we know either the seat or the nature of the connection? How much of keen speculation has exhausted itself in the effort to explain the sequence! Now the theory of occasionalism, now that of pre-established harmony, held its alternate sway. Cerebral physiology is advancing with rapid strides. Deep shadows are already cast by coming events which may bear some explanation of the mystery. At present we may say that we know something of the anatomical *substrata* for pure mental acts. But may we say with Wundt, Lays, and others, that nervous excitation conveyed to the cerebral cells becomes transformed into sensation? Does such a formula really add anything to our knowledge? Does it afford us aid in conceiving a mechanism competent to effect the transformation? In other words, does it yield any new truth or explain away any old one? Does it make more clear what was before obscure? If we cease to question physiology as to the connection between the physical and mental states, and call for an answer from philosophy, the best step for the physiologist, *qua*-physiologist, to take is to seek for some philosophical system commanding universal homage; and failing in his search, to hold his judgment in suspense. If he should wait until he finds wherein a difference shall be reconciled, he will, I fear, have to wait long.

> "Rusticus expectat dum defluat amnis, at ille
> Labitur, et labetur in omne volubilis ævum."

Mr. Pond exhibited a

NEW KIND OF SPHYGMOGRAPH,

which could also be used as a cardiograph. He explained its mechanism: it could be easily applied to any part of the body; the pressure can be graduated from 1 oz. to 1 lb. The tracings, by the aid of a small mirror, can be reflected on to a screen.

Dr. Fancourt Barnes considered Marey's sphygmograph better than the one shown, because this one showed all the strokes to be of the same height. He asked whether the irregular beat would be shown in a cardiac tracing of aortic regurgitation?

Mr. Pond replied that he was unable to state what form of tracing could be obtained in aortic regurgitation.

Dr. Symes Thompson then read a paper on

GOUT IN ITS RELATION TO LIFE ASSURANCE.*

The object of this communication was to show the influence of gout on longevity. The conclusions were based on an investigation of the cases in which an extra or "invalid" rate was made on account of gout in the Equity and Law Life Assurance Society. The paper commenced with a very brief summary of the experience of the office in cases rated up for heart and lung disease. In both of these classes the anticipations were verified, and the expected and actual death-rates were found to correspond. In the impaired health section an extra rate was charged for " corpulence " in sixteen cases, this is proved by the results to be a more unfavorable condition than had been assumed. The "plethoric" class turned out badly. Those cases in which the "habits of life" were doubtful were most unsatisfactory. An explanation was given of the cases classed under the term " Gout," and the prevalent idea that gout promotes longevity and prevents other diseases was shown to be based on the observation of a past generation. The author showed a table based on the calculation of an experienced actuary, from which it could be seen that the deaths exceeded expectancy, and that this mortality was not limited, as in the pulmonary cases, to the earlier periods of life, but was generally diffused among those of all ages. An extra rating of 5 or 10 per cent. had proved quite inadequate. An addition of 25 per cent., or of 9 years at the age of 25, 7 years at 45, and 5 years at 55, just met the loss occasioned by the large mortality in this section (see Tables II and III). The argument that the number of gouty cases (73) was too small to base any conclusions upon, was met by an investigation into the actual causes of death in the 21 cases that occurred during the period comprised in the investigation. The table showed that 7 of the deaths were certified as due to gout, 3 from heart, and 1 from kidney disease, attributable to the same cause. The cases registered as 'syncope,' 'anæmia,' and 'exhaustion,' were suggestive of a very usual termination of asthenic gout; and 'congestion of the brain,' a common cause of death in cases of a plethoric type. We may assume also that the 'cases of pneumonia' and 'fever' owed their fatality to the disorder known to have existed in the system in each case for many years prior to the fatal seizure. The case of 'carbuncle' and that of 'senile gangrene' may have borne some relation to the underlying state (in all but three cases). This survey shows not only that death arose in the majority of cases from causes connected with the constitutional defect, but that it occurred prematurely in every case, for it is remarkable that not one of the whole number lived to the time calculated in Life Expectancy Tables, only 4 or 5 approached this period—1 (living) has reached the age of 70, and this, when taken in conjunction with the fact that many effected assurance when advanced in middle life, seems worthy of notice. Intermittent pulse may be regarded as evidence of latent gout; also changes in the cardiac rhythm. The manner in which gouty states affect the kidney, heart, liver, and brain was also described.

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* Published *in extenso*. See 'Medical Times and Gazette.'

No. 1.—Among the cases where an addition for gout has been made, the following deaths have taken place:

Deaths.	True ages.		Office ages.	
Under age.	Expected.	Actual.	Expected.	Actual.
40	·60	2	·30	1
50	3·43	8	2·37	5
60	8·82	12	8·42	8
70	12·63	18	14·77	14
All ages	13·4	21	16·65	21

No. 2.—With 25 per cent. additional rates the following results appear:

Deaths under age.	Expected.	Actual.
40	1·37	2
50	7·50	7
60	16·66	14
70	20·32	20
All ages.	20·46	21

No. 3.—25 per cent. added for gout to the ordinary or health rates equals—

9 years' addition between the ages of 20—29.
8 „ „ 30—39.
7 „ „ 40—44.
6 „ „ 45—49.
5 „ „ 50—59.
4 „ „ 60 and upwards.

No. 4.—Expectancy of life at various ages:

At age.	More years to live.
1	39
10	51
20	41
30	34
40	28
50	21
60	14
70	9
80	4

No. 5.—Life Assurance statistics:

No.	Age.	No. of years added extra rate.	No. of years till death.	Causes of death.
1	57	2	2	Ulceration of bowels.
2	28	3	3	Fall from horse.
3	46	3	3	Jaundice, tumour of liver.
4	60	2	13	Senile gangrene.
5	44	4	22	Pneumonia.
6	42	3	19	Fever, diarrhœa, lung congestion.
7	36	3	6	Anæmia and exhaustion.
8	70	1	3	Syncope.
9	33	3	19	Congestion of brain.
10	59	4	7	Carbuncle.
11	49	8	9	Heart disease.
12	49	2	19	Heart and liver disease.
13	51	5	14	Granular kidney and heart dilatation.
14	40	3	5	Do., degeneration of kidney, gouty.
15	35	3	12	Albuminuria.
16	37	3	21	Gout, kidney disease, and dropsy.
17	46	3	15	Pleurisy and pericarditis from gout.
18	34	4	3	Gout and albuminuria.
19	40	3	3	Retrocedent gout.
20	42	15	4	Gout (£10,000).
21	69	7	5	Gout with complication, stone.

Dr. Fothergill, before discussing the subject, would ask the author what he meant by gout?

Dr. Symes Thompson said he could not give the definition of gout as understood by the various medical officers who accepted the lives given in the tables shown.

Mr. Erasmus Wilson said the gout of the life offices was the old podagra. 10 per cent. was at one time considered to be a sufficient excess to charge for a gouty life; now it is well known that that per centage does not cover the risk.

Dr. Fothergill said that some time ago his own life was written up seven years; he did not think the increase would be found to be sufficient in his own case. He considered gout in the hands and feet to be less serious than in the heart. Dyspeptic gout is not so serious as in the other forms of the disease, because the dyspeptic patient is obliged to be careful and moderate in his diet. A family history of gout is more serious in some families than in others. Heart gout is the most serious form of the disease. A gouty history means a shorter life than the average.

Mr. **Wm. Adams** asked whether all cases of gout required the addition of twenty-five years to make the life office safe in selected cases. He considered that small additions to the age for different diseases are vexatious to the public and unremunerative to the office, and that it should not accept doubtful lives except at a high rate of increase.

Dr. **Theodore Williams** thought the office rates of increase for gout ridiculously low; they made the same rate of increase at every age. The habits of the candidates were not sufficiently taken into account. In many instances the private medical man of the candidate should be consulted as to his habits and past illnesses, one interview not being sufficient to enable a correct estimate to be formed. He thought 25 per cent. increase in some cases far too high. Some offices inquire almost too fully about the candidate's relations and not sufficiently about his private history.

Dr. **Routh** considered that we were only on the threshold of the subject. Gout has greatly increased during the last few years, which he considered to be due to the greater consumption of meat food and cheap bad wine.

Dr. **Symes Thompson** said that formerly by "Gout" was meant gout in the foot. Now three or four separate kinds were recognised. He did not consider that the addition of 25 per cent. was too large an increase, as it is not really so large as it appears. Although gouty subjects may reform their plan of life, yet the gouty conditions set up by their previous bad habits were not removable by this change. When gout is developed early, life is rarely prolonged to old age.

Monday, March 17th, 1879.

JOHN COCKLE, M.D., F.R.C.P., President, in the Chair.

MR. EDMUND OWEN read the notes of a case of

STRANGULATED INGUINAL HERNIA (REDUCED EN MASSE),*

admitted into St. Mary's Hospital in November last. The woman was sixty-three years old, and unmarried. She did not know how the rupture first occurred, but she had kept it up for the last twenty years by wearing a truss.

On the 25th November a violent fit of coughing broke the truss, and the rupture descended. She was sick the next day and sent for a doctor, who reduced the chief part of the hernia, but a small piece remaining unreturned he advised the removal of the patient to a hospital, when the house-surgeon easily pushed the small swelling into the abdominal cavity. Nevertheless, the pains and sickness continued, and the next day there was tenderness over the umbilical and inguinal regions. In the afternoon (27th) Mr. Owen was asked to see her, and found her in no great distress. The abdominal ring was quite clear; pulse 92, and feeble; temp. 98°. He considered that the gut had been reduced within the abdominal walls without the strangulation having been relieved, and arranged to see her again in the evening, when, if the symptoms were not improved, he would propose to lay open the inguinal canal. There was no ecchymosis or even redness of the skin of the labium or inguinal region, so that no great force could have been employed in the previous manipulations.

In the evening she was worse; the ring was still clear, but a severe attack of vomiting brought a small soft swelling to the interval between the pillars. No attempt was made to return it, but the patient was put under the influence of chloroform, and the inguinal canal freely exposed by incision. The small swelling was then found to be a peritoneal sac of the size of a little walnut, containing serum; it communicated with a second sac, which lay within the abdominal walls, by a narrow neck of peritoneum an inch and a quarter long. A knuckle of small intestine was tightly strangulated by the neck of the upper sac, but this was easily dragged down into the inguinal canal, and the strangulation was divided. A small drainage tube was inserted and the wound was closed by catgut ligatures and dressed with dry lint and strapping. Next day the temperature was 101° F., but the woman was much better, and on the morrow the temperature was normal, and during convalescence it never rose again, though there was some suppuration from the wound.

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* This paper has been published *in extenso*. See 'Edinburgh Medical Journal,' June, 1879.

The **President** thought that Mr. Owen's case was a most important one, as occurring in a female.

Mr. **Royes Bell** had never had a case of the kind. He had seen a case where the patient was operated on for strangulated hernia, and obtained relief. The case, however, terminated fatally, and at the post-mortem a stricture was found; if this had been detected during life an artificial anus might have been made and the patient saved. He agreed that surgeons were too timid about operating early, and as to the danger of peritonitis, many operations formerly considered to be exceedingly dangerous are now performed with comparative safety, *e. g.* paracentesis thoracis.

Mr. **Thomas Bryant** considered that the reduction "en masse" of an inguinal hernia was an impossibility, although in cases of femoral hernia this does occur. In point of fact, this should be designated a case of displaced hernia, and not a case of reduction "en masse." He thought it most satisfactory that Mr. Owen had recognised the importance of the case, and had operated early. Mr. Birkett and Sir C. Bell both recognised the difference between displaced hernia and reduction "en masse." Reduction "en masse" only occurs in femoral hernia, displacement in inguinal. Mr. Owen's case was such an one.

Mr. **Owen**, in reply, said that he considered that this was a case of reduction "en masse;" there was a sac, and it is not necessary that there should be a peritoneal lining to it. In operating he always made a free incision, and then carefully explored the peritoneal cavity for any constriction.

Mr. Teevan then read a paper on the

DIAGNOSIS AND TREATMENT OF IMPACTED URETHRAL CALCULUS.

He observed that the stone might have come from the kidney, bladder, prostate, or have been formed in the urethra, where it was usually phosphatic and elongated.

An oxalate-of-lime calculus was more likely to become impacted than a lithic acid or phosphatic one, as it was often irregular in shape, rough, and spiculated.

It was not always easy to make out the presence of a stone, for when it caused retention it might be closely simulated by an enlarged third lobe of the prostate or a rough, gristly structure.

Calculi could not always be felt through the urethral wall. When situated in the deeper portion of the canal, a phosphatic stone behind a tight stricture, might, when touched, impart a sensation similar to that obtained from a gristly stricture.

The presence of a calculus in any portion of the urethra was usually announced by a sudden interference with the act of micturition. Some patients suffer great pain, whilst others experience but little annoyance.

There was one sign which he looked upon as pathognomonic, of impacted urethral calculus, and which he believed he was the first to point out: it was the forcible expulsion of the urine in several streams, instead of one, and this phenomenon would, he observed, occur, whether the urine was passed naturally or through a catheter. This did not occur in cases of enlarged prostate or stricture; the stone split the stream of water into several streams, and the irritation set up by the foreign body caused the bladder to contract with great force.

If a stone were left *in sitû* it usually gave rise to retention, ulceration, or extravasation.

When a calculus was impacted in the fixed portion of the urethra the best way was not to attempt to extract it, but to try and gently push it back into the bladder with a large wax bougie, the end of which had been warmed, so as to permit it to change its conical extremity into a concavity when pressed against the presenting surface of the stone, which was always conical; once in the bladder it could be easily and quickly crushed.

If the stone were in the penile urethra an attempt might be made to extract it. If it could not be moved either forwards or backwards it must be cut out. All incisions into the penile urethra ought to be valvular, otherwise a fistula might remain.

After incision into the perineum the patient ought to begin to withdraw all his urine by the catheter on the fourth day, to hasten the closure of the wound and prevent a fistula. It was bad surgery to tie a catheter in the bladder, as it was not only useless but injurious.

In boys lithotrity was not usually eligible or desirable; incision would be more frequently required than in adults. A stone in the membranous urethra of a boy ought not to be pushed back, but cut out.

Mr. OWEN considered Mr. Teevan's cases were carefully reported. In many cases of impacted calculus it would be impossible to push the stone back into the bladder with a catheter. On one occasion he was called to a case of "œdema of the scrotum," where the house-surgeon had passed a catheter which looked doubled up, as if it had not entered the bladder. Mr. Owen passed a metal catheter and felt a stone; he cut down freely, but although the stone was removed the patient, being old, died (fragments of calculus shown).

Mr. BRYANT expressed his surprise that the author had not referred to impacted calculus as the general cause of extravasation of urine in children. Impacted calculus is rare in the adult, but common in children. He had seen a few cases of extravasation of urine in children caused by impacted calculus. The best treatment is to cut down and remove the stone. In adults it is better to cut down than to press the calculus back; he deprecated any violence to the urethra either in front or behind the stone. His experience was against pressing any stone or fragment of a stone back into the bladder, as no one can tell what damage may be done to the portion of the urethra behind the stone; where it could be done easily a calculus should be pushed back into the bladder and then crushed. He would like to know in how many cases Mr. Teevan had succeeded in pressing back a stone into the bladder with a wax bougie? Did not the softened wax bougie double up when used? He would also ask in how many cases he had removed a stone from the penile portion of the urethra by means of a valvular incision. Mr. Bryant had never performed this operation; would there not be great risk of extravasation? He thought a free incision a better plan; no extravasation followed, and the result was satisfactory.

Mr. Royes Bell had seen several cases of the kind in children, but never in adults. He mentioned a case of calculus in a child æt. 9, where the stone was stopped at the meatus: it was larger than a No. 12 catheter. Also another case where the stone was cut out in the penile portion of the urethra; penile fistula resulted. He thought the valvular opening as suggested by Mr. Teevan was a good idea. He had never seen extravasation caused by operating on the front part of the urethra.

Mr. Mason said that in all the cases he had had under his care of impacted calculus the skin was so swollen that it could not be drawn on one side. He therefore cut down and removed the calculus.

Mr. Teevan, in reply, said that his paper referred to cases of impacted calculus which caused retention, and not extravasation. In extravasation the only thing to be done is to cut down and remove the calculus. All his cases had occurred in adults. He strongly objected to any force being used to press the calculus into the bladder; he would rather cut than use any force. He had operated in the penile portion of the urethra for impacted calculus in two cases. There was neither extravasation of urine nor fistula. It is advisable to draw off the patient's water with a catheter after this operation. With wax bougies much more force can be used than one would suppose; the bougie only wants softening, not melting. The operation is perfectly feasible, although in his last case it failed, and he had to cut the stone out of the membranous portion of the urethra. He did not think an impacted calculus occurring in a child should be pushed back, as the urethra is so small that lithotrity could not be performed.

Monday, March 24th, 1879.

John Cockle, M.D., F.R.C.P., President, in the Chair.

Mr. Malcolm Morris read notes of a case of

ERYTHEMA MULTIFORME.

H. M—, æt. 6 years and 4 months, was admitted an out-patient of St. Mary's Hospital, under Dr. Shepherd's care. The child was evidently suffering from cold. The mother, a poor anæmic delicate-looking woman, had had rheumatism. The child had had no serious disease, though it was badly nourished; the three other children were fairly healthy. About eight weeks before coming to the hospital an eruption appeared on the extremities, which the mother thought was nettle-rash. On the Sunday preceding the appearance of the eruption she complained of pains in the limbs, with shivering, sickness, and considerable drowsiness. The next day some spots appeared on the back of the right forearm, and on the Tuesday several appeared on both arms and a few on the face; those on the hands vesicated. There was slight itching on the Monday, but not afterwards. On the Wednesday more appeared on the face, arms, and knees. On the Thursday the author saw her for the first time. The hands and feet were blue and cold; there were broken chilblains in various stages on the feet, but none on the fingers. The eruption was situated over the extensor muscles as high as the bend of the elbow: on the right arm on the radial side, on the left three in patches—over the wrist, in the centre of the forearm, and round the elbow-joint. On the front of the forearm the eruption was scattered irregularly. The eruption also appeared on the face. They were raised erythematous papules of various sizes, some isolated, others with a tendency to run together, forming an irregular outline, varying in size from a small pea to a half-crown. The papules had a well-defined margin, which was darker in colour than the centre; some were vesicating, others were covered with a blackish scab, around which were several smaller vesicles, the fluid in these was serous, not purulent. Under the author's treatment the disease disappeared in ten days. He watched the disease carefully from day to day, and was thus enabled to divide its progress into four stages:—(1) An erythematous stage, lasting about forty-eight hours. (2) A central vesicular stage, lasting about twenty-four hours. (3) The formation of a central scab, and the appearance of a peripheral vesication. (4) Desquamation. In the second stage some of the vesicles had an umbilicated appearance, probably due to the commencement of the absorption of their contents. Mr. Morris was inclined to think that the condition was simply a vesicating erythema intimately allied to chilblains, and to be fairly considered a variety of Hebra's erythema multiforme. He wished to hear the opinion of the Fellows.

The **President** questioned whether this was a case of hydroa, and asked if the fluid in hydroa had ever been analysed.

Dr. T. **Colcott Fox** said that this was not a rare disease; it occurs in the autumn in rheumatic patients, and is the herpes iris of Bateman. In severe forms there is often herpes of the lips and mouth; the hydroa vesicular of Bazin is acknowledged by him to be the herpes iris of Bateman. It is more common in adults than in children, and is very difficult to treat. Erythema does accidentally vesiculate in severe cases, whereas herpes iris does *always* vesiculate.

Dr. **de Havilland Hall** asked whether there was any family history of gout or rheumatism in this case, as that might throw some light on the subject?

Dr. **Haden** remarked on the frequency of gout occurring in children. Within the last two days he had seen two children under four years of age who were subject to gout.

Dr. J. **Milner Fothergill** said gout certainly did manifest itself in children, but how much it had to do in causing their skin diseases he could not say.

Mr. **Morris**, in reply, said that the age of the patient was six years and four months. There was no history of gout, and he did not consider this a case of herpes iris. He could not agree with Dr. Fox that erythema multiforme only vesiculates accidentally. He did not know the chemical properties of the fluid in this case.

Dr. **Dowse** then read a paper on

"VASO-MOTOR AND TROPHIC NEUROSIS."

He commenced by stating that under the head of nervous disorders was embraced not only our objective material and volitional parts, but also the co-relation of these with subjective as well as mental morbid processes, in the consideration of which there was field for study and reflection, of which he had no hesitation in saying that up to the present time the mind of man had but a feeble and withal very incomprehensive grasp.

The nervous system embraces a chain of phenomena by which are linked together every part of our conscious and unconscious being, and it was impossible for us, even at the present day, to say how far and by what means these were intimately associated.

In reference to the vaso-motor centres, he referred to the prize essay of Eulenberg and Guttman, wherein they state that certain well-known investigations had placed it beyond doubt that the vasomotor centrum, for the most part (including the head), was in the medulla oblongata; and further, not only have Budge's former experiments proved the influence of the pedunculus cerebri on the vessels of the opposite half of the body, but their own investigations showed that certain defined localisable vaso-motor districts existed on the surface of the brain in dogs in the upper part of the cortical substance; and the experiments of Goltz upon the sciatic nerve and lumbar part of the spinal marrow of dogs had proved that there were two kinds of fibres governing the movements of vessels, the one dilating and the other contracting them.

It was by the due correlative action of these nerves that the tone of the vessels and nutrition of parts was maintained.

In speaking of trophic nerves the author stated that up to the present time they had not been made evident to us by dissection, yet from analogy it was quite rational to infer that they had an existence quite independent of those nerves which merely controlled the circulation, for it had been shown by Claude Bernard, M. Ollier, and others, that the branches of the sympathetic nerves may be divided without producing any alteration in the nutrition of parts through which they ramify, although the resulting congestion be intense and prolonged, and that it followed as a rule that the congestions arising from paralysis of the vaso-motor nerves and derangements in the nutrition of parts were, as a rule, as far as clinical teaching and experimental physiology showed, quite independent of each other; and M. Brown-Séquard had shown that paralysis of a vaso-motor nerve might be carried so far that not even a drop of blood flowed on pricking the skin, that the vitality decreases, and the parts become pallid and cold, but no changes in nutrition occur.

It was not uncommon to find cases, notably among hysterical patients, where there was a very intense and persistent check to the circulation, yet troubles of nutrition did not arise under these circumstances, so that we were compelled to fall back upon what he admitted was in a measure theoretical. That there was a set of nerves intimately associated with compound cerebro-spinal nerves, which had an especial function in regulating and controlling nutritive processes.

We had no better established fact in the whole range of neuropathology than in those disorders of nutrition of distant parts of the body which resulted from destruction to brain-tissue by vascular changes, and that these took a direct course in conformity with the histological direction of the nerves implicated, and that deaths arising from this cause were often more frequent than from the primary seat of disease in the brain and spinal cord.

By way of examples he referred to bedsores and to the rapid destruction of the mucous surface of the bladder and urinary tract.

He pointed out that consecutive lesions of nutrition, due to central brain disease, sometimes deceived the physician, who mistook them for the disease itself.

Dr. Dowse concluded his paper by drawing attention to the parts played by the vaso-motor and trophic nerves in hemicrania, angina pectoris, facial hemiatrophy, muscular atrophy, and pseudo-muscular hypertrophy.

The PRESIDENT considered the question of the trophic nerves was slippery ground, and more a matter of inference than of demonstration.

Dr. JOHN COOK asked if there was any particular cause for general muscular paralysis? also whether there was any connection between these nervous diseases and acute yellow atrophy of the liver?

Dr. J. MILNER FOTHERGILL said that it was agreed that trophic nerves did exist. He mentioned Mr. Hutchinson's case, in which sloughing of the fingers followed the division of the ulna nerve and pointed to the fact that increased nerve force was followed by hyperplasia of muscular fibres, as seen in the blacksmith's arm, and in the left ventricle in mitral regurgitation. First, there is palpitation; secondly, hypertrophy. Dr. Lauder Brunton has shown that irritation of a motor nerve increases the blood supply to the part as well as the movements of the part. Hypertrophy of the heart is due to reflex action.

Dr. DE HAVILLAND HALL said he had seen a case of stomatitis following measles. Had this anything to do with nerve changes? Clubbed fingers, it is well known, occur in phthisis, heart disease, and empyema. He would ask, What tissues in the fingers are increased in these cases? He had never been able to make a post-mortem examination of such fingers.

Dr. T. C. FOX said that skin diseases show nerve changes as much as any diseases. He mentioned, as examples of skin diseases due to nerve changes, alopecia, pityriasis rubra, and scleroderma.

Dr. LEARED asked if Dr. Dowse could tell him to what form of nerve disease glossy skin was due? Mr. Adams removed the head of a thigh-bone, and the operation was followed by this glossy condition of the skin.

Dr. DOWSE said that most of the questions asked had been answered in his paper. Muscular paralysis may be due to many forms of brain changes. He had never met with a case of acute yellow atrophy of the liver which was due to or occasioned by nerve changes. He could not give any reason for the occurrence of stomatitis after measles. He referred Dr. Hall to his paper in the 'Examiner.' The change in the clubbing of the finger's end is of a fibroid nature. He only brought forward one or two forms of skin diseases, but he fully recognised the large number of skin diseases which were due to nerve changes. The changes which gave rise to glossy skin he could not explain.

Monday, March 31st, 1879.

JOHN COCKLE, M.D., F.R.C.P., President, in the Chair.

Dr. C. T. WILLIAMS read notes of some cases of

PHTHISIS TREATED AT HIGH ALTITUDES.*

After drawing attention to the backwardness of the British public to adopt this mode of treatment compared with the great favour it met with among Continental nations, he remarked that now it was probable that the opposite tendency would prevail, and that, instead of too few, too many consumptives would resort to high altitude stations, and among these quite unfit cases.

The principal characteristics of mountain climates, such as those of Davos and the Engadine, in winter were—(1) The rarefaction of the atmosphere as shown by the low barometric pressure, causing an increase in both pulse and respiration rates. (2) The dryness of the air resulting from the low temperature. (3) The intensity of the solar radiation, which enabled invalids to sit out of doors, though in the shade the temperature was below freezing. A comparison between this winter's results at Greenwich, Cannes, and Davos, showed solar radiation to be most powerful at the latter place, a conclusion referable partly to the snow reflection and partly to the rarefaction of the air. (4) The stillness of the atmosphere. The author then adduced four cases illustrative of the good and bad effects of mountain climates. In the first, an instance of hæmorrhagic phthisis where limited consolidation existed, arrest of the disease, great gain of weight, and increase of bodily vigour resulted from a residence of five months. In the second, a case of limited excavation of one lung, contraction of the cavity, and return to good health, occurred in one winter. In the third instance, both lungs were attacked, there being a large cavity in the right. Here no benefit resulted from a residence at high altitudes, but rather the reverse, as the extreme cold and rarefied air induced lividity of the skin and a fall of temperature. A great depression of the vital power followed. In the fourth, a case of pneumonic phthisis with a cavity, cicatrization took place at Davos during a two months' stay, the patient afterwards making a trial of the South African mountains, with great benefit, and attaining complete arrest of his disease. The principal influence of the climate of high altitudes is decidedly stimulating, increasing the appetite, improving the digestion, and quickening the respiration and circulation, the latter effect causing it to be unsuitable in cardiac and cerebral cases. The change in the state of the lungs, as evidenced by physical signs, was rapid diminution of dulness, due either to absorption of the consolidation, to hypertrophy of the lung tissue, or to localised emphysema. This feature was more marked than any of the auscultatory phenomena, the moist sounds becoming drier, or cavernous sounds becoming less distinct. Pulmonary hæmorrhage was much less frequent than at low levels. To profit by the climate a certain standard of constitutional strength was necessary, and patients who were able to take abundant exercise improved most. Cases of limited consolidation or cavity, where in each case it is confined to one lung, and cases of hæmorrhagic phthisis, make excellent progress, and in many instances become arrested. The contrary effect is produced where pyrexia exists; where there is a tendency to it, the stimulating influence of the air seems to foster this symptom, as well as in all cases where the lungs are largely involved and the breathing area limited, for these patients suffer from the cold and from the rarefaction of the air, and present livid faces and hands, the digestion not being kept up to a proper standard. The climate is also suited to cases of chronic rheumatism.

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* This paper has been published *in extenso*. See 'Lancet,' August 9th and 16th, 1879.

The **President** thanked Dr. Williams for his remarks, and said that he considered the subject very interesting, and called attention to the fact that many cases of phthisis are arrested for a time, and some cured without climatic changes.

Dr. **Symes Thompson**, in thanking Dr. Williams for his paper, said that few medical men had been to Davos in winter as he had been, and had there seen the cold, blue fingers and lips of some of the patients who were sent there for relief. This winter he himself had dissuaded many patients from spending the season in Alpine climates.

The paper written by Mr. Simmon on Davos as a health resort had induced many to go there on their own responsibility, and with questionable results. It has been proved that hæmorrhage from the lungs in high altitudes is diminished when the atmosphere acts favorably. The type of cases which may be rightly sent to the south is the bronchitic or chronic bronchitic case; with the soft, flaccid temperament and rheumatic diathesis, Davos may be beneficial. He had had several cases which had been benefited by travelling in a padded waggon about fifteen miles a day in South Africa. He referred to one case, a friend of his, who died two days after his arrival at Davos; this was an acute case, and the patient should never have been sent or allowed to tax his energies by such a journey.

Dr. **Heron** asked if it was true that decomposition and the decay of animal and vegetable matter was very slow at Davos; and whether it had not obtained a reputation for the cure of patients, merely because they were enabled to take out-door exercise? Had it not been proved that death from phthisis had been diminished 25 per cent. by drainage?

Dr. **Leared** said he had seen patients who had been to Davos, and it was his opinion that a reaction was setting in against this place, and he would like to know what were the benefits to be derived from it. In Iceland no phthisis exists, the atmosphere is cold and clear, and the inhabited parts are not much above the level of the sea. In Morocco, where there is also no phthisis, the atmosphere is the reverse of Iceland, and the soil is sandy; there is also no phthisis in the valley of the Jordan, which is eighty to ninety feet below the level of the Mediterranean, and the atmosphere of these three places is totally different from that of Davos.

Dr. **Williams** thanked the Fellows for their remarks. He thought that many of the cases sent to Davos were improved by the change, the improvement is so rapid; not only was the disease arrested, but the general health became improved. For laryngeal cases Davos was not fit. He saw one case of this kind where the patient was as bad as possible, and went home to die. Mr. Simmon's paper had had the effect of causing many to go to Davos during this last winter, and doubtless rheumatic cases were benefited by being sent there. He could not say whether decomposition was quick there, but thought it was slow from its coldness. He could not speak of the permanent good to be derived from going there, as he had not seen a sufficient number of cases to justify him in forming an opinion. The actual benefits of a residence at Davos are due to the stimulating influence of the sun and the rarefaction of the air, which, while they increase the work that the lungs have to perform, also enables them to do it. Occasionally there are slight fogs; but, as a rule, the climate is remarkably free from them. It is not known why phthisis is not found in certain localities.

Dr. **Gowers** then read a paper on

SOME OF THE CAUSES OF EPILEPSY.

He said that his object was to consider briefly those causes of this condition which had hitherto received little notice. The association of epilepsy with phthisis and syphilis was first considered. In family histories the association with phthisis is very obtrusive in the study of epilepsy, but not conspicuous from the side of phthisis, and any causal connection between the two diseases is probably rare. Acquired syphilis seems not to be a cause of idiopathic epilepsy; inherited syphilis probably is. The frequency with which rickets is a cause of permanent epilepsy was next considered. At least three-fourths of the cases of epilepsy dating from infancy are believed to be the consequence of rickety convulsions. The importance of this as bringing many cases of epilepsy within the group of preventable diseases was pointed out. The association of cardiac disturbance and epilepsy was shown by the statistics of sixty-six cases observed by the author, in which the two were conjoined, in twenty-five of which there was mitral or aortic disease.

The possible connection of these two was discussed, and their bearing on the unquestionable value of digitalis in the treatment of epilepsy, for which it has had repute for 200 years.

After speaking of the connection of epilepsy and chorea, the effect of transient causes in producing permanent epilepsy was discussed in relation to reflex causes, transient cerebral congestion, &c. Acute specific diseases as causes of epilepsy were then adverted to, and the influences of certain toxic agencies—alcohol, nitrous oxide, and albuminuria. Six cases were mentioned in which lead poisoning caused fits similar to idiopathic epilepsy, and cases in which chronic renal disease without uræmia produced the same effect. Lastly, pregnancy was mentioned as a cause of epilepsy, and the different effects of pregnancy upon epilepsy were pointed out.

The PRESIDENT thanked the author for his valuable paper, and asked the Fellows to confine their remarks to the causes of epilepsy.

Dr. WILLIAMS did not recognise any connection between phthisis and epilepsy; they were both common diseases. He thought that in many families diseases exist which are not in any way connected with each other. He had seen cases of heart and aortic diseases associated with epilepsy, and mentioned a case of the former which had existed for thirty years, and then was succeeded by epilepsy. In this case the treatment was directed to the heart disease alone, and when this was relieved the epileptic fits disappeared. The patient, however, died, but the two years preceding that event were passed without any epilepsy.

Dr. DE HAVILLAND HALL had seen two cases of chronic gastric disease combined with epilepsy. In the first, as the gastric disturbance was cured under the influence of nitrate of silver, the epilepsy disappeared. In the second case there were symptoms of gastric ulcer. The patient had pain after food, and on one occasion hæmorrhage. He asked Dr. Gowers as to his experience of the connection between gastric disturbance and epilepsy.

Dr. SYMES THOMPSON asked if it was in the author's experience that the children of inebriates suffered from epilepsy. He did not think that phthisis and epilepsy were dependent on each other.

Dr. LEARED referred to the effect of certain drugs in epilepsy. Is the influence of bromide of potassium due to its contracting the vessels? He had seen a case of gastric irritation in a child combined with epilepsy. He treated the child, whenever a fit threatened, with ipecacuanha until sickness was produced, with much benefit.

Dr. **Gowers**, in reply, said that he was quite prepared to accept Dr. Williams's theory of the connection between phthisis and epilepsy. Digitalis was as useful in epilepsy dependent on cardiac disease as in other cases of epilepsy. But he thought digitalis was prejudicial in cases of epilepsy associated with aortic regurgitation and hypertrophy of the left ventricle. But when hypertrophy of the left ventricle was absent in cases of aortic regurgitation and epilepsy, digitalis may be given with effect. In his opinion chronic gastric diseases did not cause epilepsy, although the acute gastric diseases did increase it. Nitrate of silver was very beneficial in epilepsy. He had no experience as to the effect of intemperance in parents producing epilepsy in their offspring. He thought in epilepsy there is undue mobility of the nerve cells, and that bromide of potassium acts upon the nerves, and not on the arteries. Vomiting prevents both spasms and fits.

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April 7th, 1879.

John Cockle, M.D., F.R.C.P., President, in the Chair.

Mr. **Benton** read notes of two cases of

SEVERE ECZEMA SQUAMOSUM TREATED WITH LINSEED-MEAL BATHS.

(Photographs shown before and after treatment.)

Case 1.—H. R—, æt. 23, a well-nourished man, with red hair, was admitted into the Highgate Infirmary 5th February, 1876, suffering with a severe, scaly, weeping eruption, which covered his chest, abdomen, pubes, neck, back and scalp. He was a native of Newport Pagnell, but had been lately working in a badly ventilated shop in London. The crusts which formed occasionally peeled off, leaving a red, wet surface. He was treated locally with a powder containing oxide of zinc and starch, and internally with a mixture containing six minims of the arsenical solution, and ten grains of the iodide of potassium, in camphor water, three times a day after meals, with negative results, for a month. He was then ordered a linseed-meal bath once a week, and the raw surfaces on the body were covered with zinc ointment. After seven weeks there was a slight improvement. The baths were then continued every other day for five weeks more. No beer was allowed, but meat, milk, and vegetables of the natural order Cruciferæ. On the 23rd June, four months after admission, he was discharged, the skin looking and feeling almost well.

CASE 2.—F. H—, æt. 29, a strong labouring man, was admitted on the 19th February, 1876, and discharged on the 4th July following. He was affected with the same disease, with the difference that the scales were much finer than in the preceding case, and in addition the conjunctivæ were also affected. The same treatment was followed, and with equally favorable results.

Dr. ROUTH asked the proportions and composition of the meal baths used by Mr. Benton.

Mr. JABEZ HOGG asked if any treatment beyond good food and these baths was used.

Dr. DE HAVILLAND HALL said that he would like to know if arsenic was given during the whole period of the treatment, and how the baths were administered.

Mr. MORRIS asked how often these baths were used, and whether plain baths had been tried in these cases. He considered that plain baths or the application of oil to these scales would have answered equally well.

Dr. DOWSE had seen both these cases, and in each the disease was very severe. The improvement under the treatment adopted by Mr. Benton was rapid and complete.

Mr. BENTON, in reply, stated that the proportions used were—Linseed meal, 1 lb.; warm water, 10 gallons. The patient was kept in the bath for half an hour. Arsenic was given for the month immediately before the baths were tried, but was given none after they were commenced.

Mr. JABEZ HOGG then read his paper on

ARSENICAL CONJUNCTIVITIS AND ARSENICAL WALL-PAPER POISONING.*

The author drew attention to the fact that while many other subjects relating to the public health were being constantly discussed, the danger arising from the use of arsenic in our domestic manufactures seemed to be passed over and lost sight of, from a belief in the infrequency of its occurrence. It was his object, however, to endeavour to show that arsenical pigments being generally employed in the manufacture of wall papers, prints, muslins, calicoes, and artificial flowers, as well as in numbers of textile and ornamental articles in daily demand, great necessity exists to protect the community at large from the ill effects of this poison, and this was his object in bringing the matter before the Medical Society of London. There is a difficulty in recognising that an homœopathic quantity of floating dust may be the immediate and exciting cause of an alarming illness. Dr. Hinds, of Birmingham, was for a long time unable to conceive that his sufferings, extending over many months, were due to a "neat green paper" with which the walls of his smoking-room had been hung; and those of his medical friends whom he had consulted suggested every explanation of his symptoms but the right one. Professor A. Taylor failed altogether in his attempt to convince a Committee of the House of Lords of the danger to the public health arising from the increasing use of arsenic in the various manufactures. But the facts then elicited (1856) had the effect of directing some attention to the evil. Dr. Halley was then suffering from a train of symptoms which totally incapacitated him and sorely puzzled his medical adviser, until reading a report of Dr. Hinds' case. He had examined the paper on the walls of his study; it was discovered to be loaded with arsenic. He removed it, and directly recovered his health. In every particular the symptoms of these two cases were alike, and both were typical of arsenical wall-paper poisoning, recovery following the removal of the paper from the walls in each instance. Mr. Hogg then drew attention to two points in connection with this subject: (1) As to the special symptoms produced by the dust thrown off from the walls; whether and in what particulars they differ from those observed in the administration of arsenic as a medicine. (2) Whether the greater amount of activity and virulency observed in wall-paper poisoning is due to the poison being taken as a finely divided dust or as an evolved gas, the combined action of the two rendering the poison more dangerous. With regard to arsenical conjunctivitis, the symptoms did, in the author's opinion, indicate a special form of disease, produced by the dust, which produces a mechanical irritation, then a discharge of a more purulent nature, and ulceration of the mucous membrane; varying degrees of symptomatic fever attend the attack; the pulse is accelerated and fuller; the tongue white, furred, and sore; the mouth dry, and the throat sore; there is more or less of nausea or vomiting. While the digestion is deranged, the appetite is impaired, and the bowels are irritable. The local symptoms are, greatly increased lachrymation, associated with a muco-purulent discharge; turgidity of the superficial vessels, chiefly of the conjunctiva, and on closer inspection the sclerotic is also seen to be involved, which accounts for the orbital pain, and a feeling as if some irritant was present between eyeballs and the eyelids, and from this cause the cornea is apt to suffer, as there is a constant desire to remove the supposed body from the eye. A faint vesicle shows itself about the lower margin of the cornea, and pustular eruptions are seen about the meibomian follicles, and the case falls into a chronic form (ciliary blephoritis) of an unusually obstinate character. The dimness of vision depending more on the mucous discharge than on the actual loss of visual perception. Mr. Hogg then related several cases in point. One vividly-drawn picture of symptoms experienced by Professor Taylor, F.R.S., of Manchester, and another by Professor Reynolds, who thus described the particulars of his case to the author:—"I have lived in my present home since 1868, spending a great deal of time in my study, a small room about fourteen feet square, and, until 1876, I had been remarkably free from headache or any sickness. During my absence in July, 1876, my study was repapered with a light, bluish-green, unglazed paper. In August I returned home extremely well, and having work to do I spent the next fortnight almost entirely in my study. I had not been home more than a day before I began to feel poorly; a set headache, and a faint, sick feeling were the earliest symptoms, and towards the end of the fortnight a sore nose as well. I then left home, and immediately recovered. In October I returned, and not having the least suspicion that my former sickness had been due to the room, I inhabited it as before. The same headache and sick feeling came on again, and in time I became worse; twice I fainted, and seemed to be always on the point of doing so. I could not account for what was amiss with me, but assumed it was overwork. This view was confirmed as I worked in my study, and always seemed worse after a long spell, and noticeably better after spending an evening away from home. About Christmas, being poorly, I left my home for a fortnight, and returned much better. On my return I spent two consecutive days in my study, and about 12 p.m. on the second day I again fainted. I now for the first time suspected the paper; this was after a conversation with Dr. Roscoe. I removed into another room, and although I did not abate work I felt no more of the headache or sickness, and soon recovered my usual health. Dr. Roscoe examined the paper and the dust collected, and found arsenic in both. I avoided the room for some weeks, and by way of a test returned for a few days, when the same effects recurred. I then had the paper removed, but did not return to the room until just a year ago, and since I have inhabited it without any return of the symptoms described. On looking back it seemed to me that matters became worse as the weather became colder, and it was necessary to light a fire in the room, but as to the question of gas *versus* dust I can say nothing." The effect upon workmen engaged in the various manufactures of papers, calicoes, &c., was then shown, the various kinds of arsenical pigments employed, which as they become dry are easily detached, and float about with the air of the room; and as many lives have doubtless been sacrificed, the author pointed out that it had become necessary to inquire how this was brought about, whether by the dust alone or by the combined action of the dust and the arseniuretted hydrogen gas evolved by a process of decomposition of organic matter in combination with the pigment. He cited a number of cases of poisoning which had been traced to these causes, and considered two important points in the history of wall-paper poisoning had been arrived at:—(1) That dust is separated in sufficient quantities to give rise to a peculiar train of symptoms. (2) That under certain conditions arseniuretted hydrogen is evolved by decomposition, and may materially add to the virulence of the poison. That at all events, the dangers to the public health from the use of arsenical pigments are real and urgent. He showed some wall paper that had been made without arsenic, and considered that the evils connected with the nefarious manufacture of those made with poisonous compounds called for further action to be taken to entirely prohibit the sale of the same.

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* This paper has been published *in extenso*, see 'Sanitary Record,' April 25th, 1879.

The PRESIDENT considered that this matter was of a most important character, and he hoped that those who had investigated it would take part in the discussion.

Dr. **Heywood Smith** asked what course should be adopted to get wall paper without arsenic.

Dr. **Jagielski** referred to the indefinite character of the symptoms given in Mr. Hogg's cases. Great prominence had been given to the conjunctivitis. In arsenical poisoning there is inflammation of the whole mucous tract. The conjunctivitis which can be seen, of course, attracts attention, but often diarrhœa is the main symptom of the poisoning, and then the true cause is more likely to be overlooked.

Dr. **Routh** said that arsenical poisoning could be caused by wall paper had long been suspected; but this form of poisoning had never been so clearly demonstrated as by the author. He quoted a case in point in which he detected symptoms which he could not relieve; and, observing in the patient's room an arsenical wall paper, he ordered his removal, and he soon got well. Varnishing prevents any ill-effects from arsenical paper. This form of poisoning may be produced by other substances than wall paper, such as silk stockings, carpets, &c., as, indeed, all the bright colours in textile fabrics are due to arsenic.

Mr. E. C. **Carr** said that bright colours can be produced without the aid of arsenic, although it is employed in many manufactures in which its use is not suspected. He considered that dangerous articles of this description should not be sold without a license or notice. He mentioned the green japanning of the tea canisters as a highly dangerous occupation, many of those employed in this trade were soon obliged to give it up. In the green Venetian blinds so extensively used the particles of the colour fly off each time the blinds are moved; thus symptoms of arsenical poisoning may be produced. He also referred to the dangerous ingredients used in some other indoor paints. Trades in which these dangerous colours are used should be stopped by the Legislature, as, the wages being high, the people employed in these occupations prefer risking their health and courting a possible early death. They therefore are not likely to take any steps for their own protection. He thought that varnishing did not have the good effect Dr. Routh attributed to it, as it must wear off, else why do things require re-varnishing? In conclusion, he felt confident that the Government would interfere in this matter if applied to in a proper manner.

Mr. M. **Morris** referred to his own case. In December, 1877, he had his dining and consulting-rooms painted; soon after he had languor and a great disinclination to work; this was followed by sneezing. His most urgent symptom was dyspnœa, which nitrate of amyl alone relieved. Soon after another resident in the house had similar symptoms. When the cause of his illness was detected he went away for a change of air; it has taken him nine months to recover from the ill effects of this poison.

Dr. BROOKFIELD had himself suffered from arsenical poisoning. He got well when he left his home for a change, but on his return the old symptoms reappeared. The cause was then suspected and removed. He thought the suggestion that a deputation should seek an interview with the Government on this subject a good one.

Mr. JABEZ HOGG, in reply, said that Reinsch's test was one which could be easily adopted where the presence of arsenic in wall paper and other materials was suspected. He considered that much good might result from a deputation to the Government on this subject.

Mr. M. MORRIS then proposed that a committee should be formed to organise a deputation to the Government.

This suggestion was unanimously agreed to.

April 21*st*, 1879.

JOHN COCKLE, M.D., F.R.C.P., President, in the Chair.

Mr. G. C. COLES exhibited some improved

TEMPERATURE CHARTS.

The PRESIDENT considered them ingenious, portable, and inexpensive.

Dr. PURCELL showed a specimen and read notes of a case of

INTESTINAL OBSTRUCTION

relieved by an artificial anus made in the right loin, under his charge at the Cancer Hospital.

The patient, a man, æt. 64, had suffered from fistula in ano ten years ago, and came under the author's notice in June, 1878. He had obstruction of the bowels in December, 1877, since which time he had suffered from constipation, but obtained temporary relief by purgatives. For five weeks after admission into the Cancer Hospital various means were tried to obtain a proper action of the bowels, but though powerful purgatives were given, they failed to bring away any solid matter, and only weakened the patient. The abdomen was enormously distended, and he vomited occasionally. The long tube was passed into the rectum, but no obstruction was reached. On the 28th of July an artificial anus was made on the right side; considerable relief followed, and the man, though weak, progressed favorably for some time. Matter, however, formed and pointed in the perinæum; this was let out by a free incision, and then a difficulty in passing water commenced, which was relieved by his taking ice, and he so far improved that he was able to leave the hospital in September, but was readmitted in January following. He took to his bed, and died somewhat suddenly on the 16th April. At the autopsy an obstruction of the colon was found, due to a thickened condition, which was white and hard, and a quarter of an inch in thickness; it gave the idea of being scirrhous, but no cells could be seen under the microscope. The thickened portion, which was about three inches long, involved the whole circumference of the gut, having a distended pouch above it, situated sixteen inches from the anus. The bladder was contracted, and, together with the prostate, looked a mass of disease, and similar in appearance to the thickened portion of the gut; the kidneys were enlarged considerably; they were also highly congested with a thick and dark cortex. The stomach was distended with fluid and the walls were very much attenuated, being nearly as thin as paper.

Mr. Francis Mason asked why the operation was performed on the right side.

Dr. Routh asked what the interval was between the injection of the three quarts of water and the operation, and also whether the author could give any history pointing to the cause of this obstruction.

Dr. Purcell replied by saying that no obstruction could be discovered on the left side, and when three quarts of water were injected the water returned only slightly discoloured. There was no previous history which would throw any light upon the cause of the obstruction. Between the 19th of June and the 28th of the following July large quantities of water were injected; he did not recollect the date when the three quarts were injected.

Dr. Churton then read a paper on the

TREATMENT OF CERTAIN PHASES AND RESULTS OF TYPHOID FEVER.

In October, 1878, Annie J—, æt. 24, married, having been ill five days, was admitted into the Leeds Fever Hospital. For two days she had an evening temperature of 105°; for seven days more it was about 104°, and it remained high (never below 102° in the evening) up to the beginning of the eighth week of her illness. It then began to oscillate violently between morning and evening, so that the chart reads thus:—November 20th, evening, 104·5°; 21st, morning, 98°, evening, 105° (7° difference); 22nd, morning, 99·6°. Observing this, quinine 3 grs., with hydrobromic acid ♏xv, was ordered to be given at 3 p.m. and 8 p.m., which being done on that day, the temperature in the evening was 100° only. Up to this time the general condition of this patient had been most deplorable. From the first, she had had an offensive vaginal discharge and great inflammation of the vulva; extreme emaciation had occurred; she was very deaf, and seemed incapable of understanding anything; wore a puzzled, perplexed look when, with loud shouting, one could make her hear a question. Her cheeks were still, and no muscles of expression seemed capable of action but the frontal, and these merely enough to indicate bewilderment; her tongue was brown and dry. She took a little milk or broth; never moved of her own accord, asked for nothing; passed motions and urine into the bed; bed sores had threatened to form, and had been scarcely and with great difficulty prevented. The vulvitis and vaginal discharge had, however, been successfully dealt with by Condy's injections and vaseline ointment. Such was her condition on the 22nd of November, and we, who were about her, regarded her as almost a hopeless case, when suddenly the quinine seemed to lay "a hand of power" upon her nervous and other cells. By accident the quinine was not repeated on the two following days, and the temperature, therefore, again oscillated 5°. Immediately on resuming the quinine the oscillations ceased, and on the third day the temperature became, and afterwards remained, normal or below it. After eight days she omitted the medicine. Three weeks afterwards the temperature was morning, 96·8°, evening, 97·6°; but although she was up, much stouter, cheerful, and getting strong, yet her face wore the dull, heavyish, expressionless look which had so often arrested my attention in patients after prolonged attacks of typhoid fever. The brain and spinal cells had not, in fact, recovered their normal state. It was this observation which led me to cast about for some means of exciting these cells to resume their wonted molecular activity, to awaken those which were half asleep, and at the same time to assist in rebuilding them to their original chemical formula, after the loss and degeneration of particles to which they, in common with all the other cells and fibres of the organism, had been subjected. Phosphorus and the hypophosphites naturally suggested themselves, with a diet, somewhat more varied, but not likely to re-excite congestion of the intestinal mucous membrane—beef jelly (strong cold beef tea), revalenta Arabica, or an imitation of it, roasted apples grapes, blancmange, milk, of course, and even bread and butter, rice pudding, and fish, although the temperature might be high, so long as there should seem no reason to attribute that temperature to inflammation in the intestine; no pain, no purging, no tympanitis, nor tenderness over the ascending colon and its region.

As an example of this treatment, and also of the action of three-grain doses of quinine in cutting short the period of temperature oscillations, as well as, later on, of the cerebral effects of hypophosphites and bark mixture, the case of Emma N—, æt. 16, may be cited. Admitted in the third week of her illness, temperature 104°, mind dull, very deaf; her temperature five days after reached 105°; it then slowly fell ,in six days, to 100°, but the next day suddenly rising to 103°, it began to oscillate 4°. The quinine and hydrobromic acid being given on the third day after, on the next day there was only 1° of difference between the night and morning temperatures (98·8°, 99·8°). Three days after this she was still disorderly in brain, rambled, and looked rather wild, slept very badly at nights, probably from the quinine. Chloral and bromide, gr. x of each, at bedtime, and omission of the quinine corrected this very easily; but she remained very dense and stupid, "no sense could be made of her," said her nurse. Temperature normal. Eggs and the hypophosphite of lime (♏xxx of Taylor's solution), with ♏xx of tincture of bark, thrice daily were ordered. In four days she was intelligent, having began to amend immediately after taking the food and drugs. But in five days more, and while still taking the medicine, the temperature again rose to 101° in the evening; next day to 100°, and as she was menstruating, the medicine was, on the day after that, discontinued. This was on February 21st. That evening the temperature was only 99°, but for the next four days, during which she was taking no medicine, and food perhaps less freely, it steadily rose to 101·3°. She then resumed the medicine and "full fever diet," there being, as in the other case, no intestinal symptoms, when the temperature began immediately to descend, and on the fourth day was normal. She very soon became bright and lively, gained flesh, and used to sing much and laugh well.

As the special aim of this part of the paper is to call attention to the action of hypophosphites when combined with bark in small doses and food, in reanimating and re-energising the cerebral cells especially, I will mention, by way of contrast, a case which occurred about the same time, and which shows how long the depression of activity on the part of those cells may last after they have been degenerated by typhoid, unless special nerve stimulants are used to restore them. William B—, æt. 13, admitted September 29th, temperature 102·4°. It became normal in three weeks, *i. e.* in the fourth of his illness; but rose again in the fifth week, and in the sixth reached 103·8°, descending to normal near the middle of the seventh. He remained in the hospital a month longer, and yet he left it with the reputation of being half an idiot. In the sixth week his apathy, dulness, want of cheek movement—the cheeks in such cases resembling sails lying idly against the supporting masts in a dead calm—together with his high temperature and soft, easily compressible pulse, had suggested tubercular meningitis, and a medicine containing Potass. Iod. gr. ½, Potass. Bromid. gr. i, Tr. Cinchon., comp., ♏x every four hours, with milk and broth *ad libitum*, and wine eight ounces in the twenty-four hours had been ordered; but though he had improved considerably under this treatment and got up in the ninth week, yet his brain remained inert. He never lost the "sails in a calm" expression of face, and, as I said, he left us with the impression that he was not far removed from imbecility. Yet this boy returned in three months to show himself, and was so changed in body, and even more strikingly in brain-power, as to make it scarcely credible that he was the same boy. Bright and laughing and fat, I never saw a more emphatic contrast. Time, fresh air, and food (to use conventional phrases), had done in three months what I could not help thinking might have been done in one month with special aids. The case of Emma N—, already related, suggests forcibly the truth of this surmise. I shall relate only one other out of several corroborative cases.

Thos. B—, æt. 42, when admitted had been ill with typhoid a month. He had congestion of lung-bases, especially the left; slow pulse; rambled in a monologue on waking up; was very deaf; even when he seemed to hear, gave stupid or senseless answers—"nothing could be made of him," it was said. Temp. 100°. In three days his condition was the same, when "full fever diet" and Taylor's solution with bark was ordered, as in the other cases. In three days he had greatly improved. In a week he was scarcely deaf at all; was cheerful and intelligent. In another week he "felt as well as ever he did" and was affecting to be athletic.

But, of course, it does not always happen that the cerebral cells are thus half paralysed. Occasionally they seem scarcely affected at all. Muscles and fat always waste away; but other cells may, or may not, greatly change; for instance, there is a case now (April) in the hospital, a trained nurse, æt. 23, with good cranial development and very considerable intelligence, who, though she had a high temperature (often 104°, once 105°) for nearly six weeks, and a return of the high temperature, and a genuine relapse, after a fortnight's interval, this relapse lasting another fortnight, equal, in all, to ten weeks of high temperature, and so of degeneration; yet during the whole time she had neither delirium, deafness, nor confusion; and so soon as the relapse was over, she read through one of Charlotte Bronte's novels, and could remember all about it as well as usual, she said. Neither did her face become expressionless to anything like the usual extent. She could stand almost without help; her pulse was fair, and the sphygmogram taken showed little dicrotism, and in short, there is no sign of weakening of any particular tissue, except the wasted muscles and fat. I shall, however, have to mention her case again in connection with the use of aconite in an earlier stage.

It may be said, in parenthesis, that neither quinine nor any other drug has been found by me to permanently cause a reduction of temperature, and the other fever symptoms in the early stage of the disease. Quinine does not seem capable of antagonising the germs or the poisons which the germs produce in the blood—it seems, in fact, to do harm sometimes—to cause increased or renewed purging, or delirium; to be, in short, merely one poison more. But when the germs, if there be germs, have lived their life and done their work and disappeared, it is then, as it seems, that quinia, nux vomica, bark, and hypophosphites can act unimpeded, each upon that particular form of protoplasm for which it has a special affinity, or to which it is a stimulant. These four are the special drugs for the later stages of the fever or its results. To turn now to those which are sometimes required in the earlier stages. Liquor Ammoniæ (♏xv) and tinctures of nux vomica and digitalis (♏x) are used when the circulation is slow, though the pulse may be quick. Aconite, on the contrary, is given when the arteries are well-filled by each heart-stroke; that is, when the circulation of blood is really more rapid than it should be. If the heart pumps 120 times in each minute and two ounces each time, obviously 240 ounces of blood must pass through the capillaries in that time; whereas if but one ounce is pumped out by each beat, then practically the heart might as well beat sixty times only with its normal effort. In the former case the arteries and capillaries would be distended—the arterial pressure would be high; in the latter, the veins would be more full. And in this case, when there is, in consequence of the rapid and feeble contraction of the heart, a backward and forward "wash" in the not perfectly emptied chambers of it, and a formation of stagnant pools of blood in quiet corners, there is danger of thrombosis, especially in diseases which greatly alter the condition of the plasma and corpuscles. (Such a thrombosis has been formed in the heart exhibited, taken from a case of scarlet fever, firmly adherent and interlaced; and if not itself the cause of death, at least it shortened life and made recovery impossible.)

Theresa R—, æt. 19, had been ill a week before her admission on November 5th, 1878. For several days after, her temperature was nearly 105° in the evening. She had no purging, but there were a few rose spots, and her father had recently died of typhoid, while a sister was now recovering from it. She was so dusky in the face, and even over the whole skin, and her pulse was so rapid (132) and small that we at first thought she might have typhus. On the third day after admission (November 8th) there were signs of pulmonary congestion; the face was a curious bluish-purplish colour, apparently from fulness of the smallest venules; the breathing was quick and the pulse very small and feeble. The bowels were opened by enema, and two leeches were applied to the chest. Their bites bled freely during the night, with some relief to the breathing. Next evening, however (November 9th), she was still very dusky or purplish, had taken milk and broth badly; 6 oz. of port, ordered the day before, had done no good. The temperature read 104° morning, 104·8° evening. These signs and the feeble circulation raised a fear of cardiac thrombosis in our minds, ♏x of Tr. Digitalis was therefore given, and seemed to have a decided effect upon the heart and pulse within two hours. Liq. Ammoniæ ♏xv, Tr. Digitalis ♏x, was then given every four hours, until the 13th (*i.e.* for four days). Tr. Nucis Vom. ♏x, Tr. Belladonnæ ♏v, having been added on the 11th; all with a view to counteract the effect of the typhoid poison upon the cells of the medulla oblongata and the cardiac ganglia. By the day mentioned (13th) the pulse was much fuller, and she was better in every way. The evening temperature was 103°; but as she was now delirious instead of lethargic, the ammonia, digitalis and belladonna were reduced to ♏x, ♏v, and ♏iij, respectively. In a week the temperature had fallen to 100°. Thenceforward she did well.

In some hospitals this patient would very probably have had baths; but former experience of cold sponging in typhoid makes me unwilling to employ cold water or baths, except in higher temperature than 105°. Many cases have at some time or other a temperature of 105°, but recover without baths—some without any special means being used at all for the reduction of that temperature. Professor Liebermeister bathes every patient whose temperature in axilla exceeds 102°. He regards this temperature of the blood as being highly dangerous to the cells of the body, that the mere over-warmth of the plasma which exudes from the capillaries and surrounds the cells, does of itself excite them to increased molecular activity, and so to molecular (physical and chemical) degenerative change. This is, of course, very possible, *à priori*; but yet birds have usually a temperature of 103°; and there are recorded cases of prolonged high temperature in human subjects in which neither death nor extreme degeneration of nervous cells occurred. In truth, it seems far more likely that the high temperature of the blood is the result, not the *cause*, of the rapid and disorderly life, and the degeneration of the body-protoplasms, and that this rapid life is caused by the fever-poisons. Even when the nervous cells, or some of them, are evidently seriously injured, and life is threatened, it is merely because the cells of the medulla, cord, &c., have for some reason become more involved than usual, have been more poisoned and paralysed, have lost their control over their peripheral tissues, have added to the high temperature themselves, and also have not been able to prevent the too quick destruction of their peripheral connections (muscles, connective tissue, epithelia, &c). Hence, the remedies used, when they cure, cure by the influence they exert upon the spinal and cerebral cells (and vessels); possibly, too, on the peripheral tissues, by a reflex or a direct act, cold water to the skin, reflexly; quinine, by direct admixture with the blood-plasma and consequent molecular influence upon the cells which feed upon it.

Turning lastly to aconite, it is not often that we find this drug clearly indicated in typhoid. The nurse already mentioned, however, as having been peculiar in almost every other respect, was peculiar also in this. In the third week of her illness, the temperature rose in two days from 101·6° to 105°. A moderate hæmorrhage from the intestinal ulcers then occurred, and the temperature fell to 102·5° in two days. The bleeding having ceased, the temperature again rose in two days more to 104·4°. It was noted that the pulse was quick, fairly full and "snappish," that is, the artery muscles yielded passively to the blood-wave to a certain extent, and then at last irritably contracted upon it. Unfortunately, I did not then take a tracing of the pulse; but there was no blueness or lividity, no extra fulness of the minute skin-veins, the arteries seemed to be well filled, and the heart was apparently pumping blood into them hard, and pumping it fast. Her condition was now just such as it had been before the first hæmorrhage; and fearing that the continued blood-pressure would cause some other capillaries to give way, it was determined to give aconite cautiously. Half a minim of the tincture was given every hour for two doses, then every two hours for ten doses more, only six in all. Tincture of aconite varies in strength, however, and this particular sample, then in use, had been proved in another case to have great depressing power over the heart. The temperature next day was 102·5° both morning and evening; and the pulse being much lower and less full and "snappish," the aconite was stopped; the temperature again rose to 104° in three days afterwards; remained at that height for three days, when aconite was again given, the chart then (February 24th) being morning, 101°, evening 104°; 25th, morning, 102° (aconite then begun), evening 103·4°; 26th, morning, 102·3, evening, 103°; 27th, a sudden drop to 97°—101·3°, led to a stoppage of the aconite; 28th, 97·4°—102°, and so on, until it reached on March 3rd, 100°—104°, and remained there for three days; it did all this in spite of quinine, liquor ammoniæ, nux vomica, and all we could do, except aconite, with which we ventured no further, and then descended in a leisurely way in six days, when it was normal. In a fortnight, the patient had a relapse, as already stated. The aconite seemed then to be useful, for the purpose mentioned, but it had no permanent effect; and, of course, none was expected of it. A trace of this patient's pulse, taken during the second week of the relapse, will be seen to differ little, if at all, from that of a healthy medical student exhibited along with it. It differs remarkably from the typical typhoid pulse trace, a specimen of which is also shown.

To summarise the paper:—(1) Whenever, in the first weeks of typhoid, the circulation of the blood is slow (though the heart's beat is quick), the blood accumulating in the veins, right heart, and pulmonary vessels, then leeches to the chest and special energisers of the spinal cord and cardiac ganglia (digitalis, belladonna, nux vomica) are indicated; while liquor ammoniæ is of especial service, both as a stimulant of all the tissues, and particularly as a preventer of thrombosis. Leeches not only relieve blood-pressure directly, but their bites probably cause reflex contraction of the venous muscles.

(2) When, as is unusual, there is a too rapid blood-stream—the arteries and systemic capillaries being kept overfull and threatening hæmorrhage, the heart beating rapidly and well—then aconite, in small doses, is to be used, not only to slow the activity of the heart's fibres and their associated nerve-cells, but also to reduce that excessive molecular activity of all the other cells of the body, of which the overheat of the blood is evidence.

(3) A temperature of 105° early in the course of the fever does not of necessity indicate the use of cold bathing.

(4) A rise of temperature at a late period of the illness does not contraindicate the hypophosphites, bark, and "full fever diet," if no decided intestinal symptoms can be found by careful examination.

(5) The temperature-danger in typhoid is not from the mere circulation of slightly overheated blood, but from the destruction of the higher sorts of tissue (nerve-cells, heart-fibres), which that overheat (sometimes) shows. There is no danger so long as the tissues affected are simply the adipose and locomotor-muscular; but, if by "accident," the cells of the cerebrum or the medulla-oblongata

and cord are early, and in an unusual degree, degenerated and paralysed, they not only raise the temperature by adding the heat they produce to the ordinary fever-heat produced by excessive decomposition of muscle-substance, but they lose control, of course, over their ordinarily subordinated and dependent tissues (respiratory and other muscles, heart, arterial muscles). Cold bathing, therefore, does good, not by simply cooling the blood, but by acting reflexly upon the nervous cells, just as in the ordinary process of animating stillborn children, or of restoring a fainting patient, or of refreshing a tired man by bathing his face. Quinine cannot grossly cool the blood, yet it can greatly lower the temperature. So food and wine do not directly cool, yet that they can lower a fever-heat prolonged by debility is a familiar fact.

(6) Violent oscillations of temperature (5°—7°) in the later stages of the disease can be controlled by quinine (gr. iij—vj), given dissolved in hydrobromic acid, an hour or two before the expected rise (about 10 a.m. and 6 p.m. usually).

(7) If the cells of the brain itself have suffered much degeneration, as evidenced by deafness, vacancy, stupidity, or even semi-idiocy, then the solution of calcium-hypophosphite, with tincture of bark, is very effective in restoring them.

The PRESIDENT considered this an important paper on a most important subject.

Dr. JOHN BRUNTON was exceedingly pleased with the specimens and their mode of preservation. He criticised Dr. Churton's division of typhoid fever, and said, when he was connected with the Glasgow Fever Hospital, he found that the cases of typhoid fever might be divided into three classes:—(1) Those in which no treatment was required, (2) those in which a good deal of treatment was required, and (3) those in which no treatment was of any use. In some cases the drugs recommended by Dr. Churton are very useful, and Dr. Brunton referred to his paper on "Aconite, and its use in all kinds of Fever." He thought Dr. Churton could not have used the tincture of aconite, B.P., because that would not produce such severe depression as Dr. Churton had noticed in his cases where aconite was given. He wished the author had described his cases more fully, instead of giving only one or two symptoms. He (Dr. Brunton) had seen red spots in consumption and puerperal peritonitis. In cases of fever with great depression he had found liquor phosphori (a solution of phosphorus in glycerine) of use as a stimulant. In the treatment of an ordinary case, commonly called gastric fever, he had used Morson's pepsine wine, with hydrochloric acid to relieve the gastric symptoms.

Dr. DE HAVILLAND HALL did not consider deafness as a bad sign in cases of typhoid fever, as it was often due to an extension upwards of catarrh of the throat, and not to cerebral lesions. He asked if the cases seen by Dr. Churton in the Leeds Fever Hospital had shown an absence of diarrhœa, as in his experience diarrhœa had not been a marked symptom during the last two years in London. He considered that dry cupping would be more advantageous than leeching. He was surprised that Dr. Churton had not mentioned the use of acids, as he had found them very useful and agreeable to the patients in typhoid fever. He also mentioned a case which had been under his observation, in which the patient was kept alive for more than a fortnight by nutritive enemata of peptones.

Dr. JAGIELSKI was of opinion that acids were very useful in the treatment of typhoid fever, if there were great weakness and high fever.

Dr. CHURTON, in reply, said that he approved of Dr. John Brunton's division of typhoid fever into the three classes mentioned by him. He had been much struck by the perfect recovery of some of the cases in the Leeds Fever Hospital. At first he gave tincture of aconite up to ten-minim doses in many cases, but lately he had met with two cases, both in medical men, in which the aconite had had a most depressing effect. In one case, S. F—, with albuminous urine, the patient took quarter-minim doses. After three doses had been taken great depression ensued. Time prevented him from giving his cases in any great detail, and he may have been wrong in his diagnosis in one or two, but that in which death ensued was an undoubted case of typhoid fever. Pepsine had been used in the Leeds Fever Hospital. He did not consider deafness by itself was a serious symptom, but the concomitant apathy is a grave symptom. Diarrhœa had not been a prominent symptom at the hospital. He agreed that dry cupping would be better than bleeding. He had found that acids and bark agreed with some patients, but not with all, and when they do not agree, then carbonate of ammonia is very useful. He had not used enemata of peptones in typhoid fever, although he had done so in other cases.

April 28th, 1879.

John Cockle, M.D., F.R.C.P., President, in the Chair.

Dr. Routh read a paper on

THE EMPLOYMENT OF A NEW POWDER FOR ANTISEPTIC AND PRESERVATIVE PURPOSES.

The author said that the powder was compounded by Dr. Oppenheim, and was adapted for all cases where alimentary or other vegetable or animal mixtures are likely to decompose by exposure to atmospheric air. Tons of meat, fish, and other provisions, may thus be preserved and kept in a healthy state for human consumption. It can be used either as a powder sprinkled over the dried fish or meat, or mixed with the pickle when salt meat is needed, or with sausages and black puddings in the process of admixture. The evil effect of the odours, not only of dissecting-rooms, but of fish, poultry, and butchers' shops could thus be obviated. Only the other day (February 14th, 1879) 'The London and China Express' stated that ten tons of fish had been destroyed by the Fishmongers' Company as unfit for use, and that at the end of the shooting season 20,000 head of game were still unsold and packed in cellars; an idea of the loss of food may be formed from these facts. This powder may be kept in solution or used directly in powder over the food; two ounces of powder to one pint of boiling water, in which meat must be kept completely covered for at least one hour, then sprinkled over and allowed to dry, it may be kept in an air-tight cask for weeks or for months if necessary.

Large joints should also be injected before packing. In preserving fish it is well to keep some concentrated solution in the proportion of one pound to one gallon, to which tea water, or soft or hard water, may be from time to time added, and the solution thus brought to its former strength. For crabs, lobsters, &c., it is well to add the powder to the water in which they are boiled, in the proportion of one teaspoonful to every three pints of water, and allow them to remain in the water until cool. New-laid eggs can be kept fresh for three or four months if placed in a solution of two tablespoonfuls to three pints of tepid water for three or four hours, thoroughly covered and then allowed to dry. Milk can be kept fresh by the addition of one teaspoonful to two gallons. Dr. Oppenheim treated newly killed poultry in this manner, sprinkling them with the solution, placing them directly in a warm room (68° F.), and leaving them there for three weeks at that temperature; no change took place. Experiments were made on a large scale by a committee of gentlemen at Bermberg, Anhalt, Germany; complete success was shown. The author placed two descriptions of powders before the Fellows:—(1) A preserving powder to keep meat, &c., fresh. (2) A disinfecting powder, to which the name "Antifungius" has been given. For the first of these the discoverer (Dr. Oppenheim) received the Grand Diploma of Honour awarded by the Jury of the great German Darz Exhibition, held at Berlin March, 1879. "Antipurgin" has been found most efficacious in the treatment of contagious diseases, as a gargle in diphtheria, and in wounds festering. Dr. Lagemann, member of the Prussian Medical Staff, found that blood treated with this powder when drawn and warm on the 11th November, 1878, was still fresh on the 29th January, 1879. He also kept pork for forty-six days quite fresh. The author then pointed out that, should these reports be confirmed, we shall not only have an invaluable lotion for wounds but we shall be able to dispense with the use of carbolic acid spray as the solution made from this powder is at once free from smell, and not poisonous in its effect.

The President asked whether the flavour of the food preserved by this powder is changed or destroyed.

Dr. Routh, in reply, said that the flavour of the food was not affected by the powder. One pound of the powder will preserve 400 pounds of meat.

Dr. John Brunton then showed a case of

NÆVUS OF THE SCALP

treated by sodium ethylate. The nævus was situated over the anterior fontanelle. The treatment has left a bare, white scar. The ethylate has been applied about twelve times at an interval of a fortnight or a month between each application. The remedy always caused some pain. In treating a case the ethylate should be applied about every fortnight or month, according to the rapidity with which the scab falls off.

The PRESIDENT then read an account of a case of

CONGENITAL DISEASE OF THE HEART, GREAT DILATED GENERAL HYPERTROPHY, WITH IMPERFECTION OF AORTIC AND PULMONIC ORIFICE.

The author mentioned that as the chief interest of this case was centered in its actual examination, he would merely detail the leading features as shortly as he could consistently with the requisite clearness. The patient is an unmarried woman, aged 26 years. When five years old she lost her mother from some chest disease as is supposed. Her father died about one year and a half ago, aged 59, of some acute disease. The family left consisted of eight children; seven brothers still survive, all of whom are in good health save one, who is somewhat delicate. She never remembers to have suffered from any illness of a serious character. About her thirteenth or fourteenth year great beating of the heart and shortness of breath were first specially observed; and since then, when weak and out of breath, with the compensation temporarily disturbed, similar attacks have recurred, followed at times by such prolonged periods of freedom from cardiac and pulmonary distress as to enable her to undertake and fulfil tolerably active duties. Menstruation commenced as early as the tenth year. She looks healthy; the cheeks are very florid; the lips of a natural colour; well-marked curvature (angular) of the dorsal spine exists. Anteriorly the chest is contracted and wanting in symmetry. The right half is flatter and smaller than the left, and just below the nipple measures at least one inch less in circumference. The right mamma is smaller than the left, and is one inch below the level of the left. The impulse of the heart is visible over the whole anterior surface of the lower two-thirds of the chest, producing displacement and bulging of the ribs as low as the eighth. The impulse is also visible in the epigastrium. Over the second and third left interspaces a more localised undulatory movement is perceptible. Very strong impulse is seen in the innominata, carotid, and subclavian arteries. No visible movement exists in the brachial or radial arteries. There is no clubbing of the fingers. No undue distension of the cervical veins is detected, neither is there a trace of cyanosis. The impulse of the heart is very heaving and forcible, systolic and diastolic, extending from the left posterior axillary line to the right anterior axillary line, but unattended by fremitus, so that relatively to her chest it is a veritable "cor bovinum." Occasional intermission occurs about once in every eighth beat over the second left interspace, beginning close to the left edge of the sternum; diastolic fremitus, very superficial, fine, but intense, exists, with a clear maximum at this site. The fremitus extends, diminishing along the interspace named to within nearly an inch of the axilla; over the first interspace the thrill is still to be felt at times, but much weaker. Over the third interspace but a trace exists until a spot is reached situate about an inch obliquely above the left nipple; at this spot grating *fremitus* is perceptible. No fremitus whatever can be detected over or to the right of the sternum, neither does it extend into the innominata or carotid arteries. The radial pulse, beating as the rule between 90 and 100 per minute, has usually an intermission like that of the heart; it is tolerably strong, but not markedly collapsing. The tracing, however, indicates aortic reflux. The breathing movements are somewhat quickened, but in other respects nearly normal. The chest anteriorly is dull on percussion from the junction of the first and second bones of the sternum directly down to the epigastrium, and transversely from the left posterior axillary line nearly to the right nipple, and downwards to the right rib. Above the right side of the sternum there is dulness, extending obliquely towards the right nipple. Upon the left side dulness extends downwards from about the second interspace. Posteriorly the percussion note is tolerably normal. Over the site of cardiac impulse murmur attends the first sound; the second sound appears to be reduplicate. To the left of the left nipple the first sound is still replaced by murmur, the second sound still reduplicate, but the sounds now begin to lessen sensibly, while over the posterior chest wall morbid sounds are no longer, or but barely audible. Above and corresponding to the maximum site of fremitus over the second left interspace, and close to the edge of the sternum, very loud, very superficial, and somewhat hoarse systolic and diastolic murmurs are heard, occupying the entire period of the heart's rhythm, and conducted, though diminishing, down the sternum to the hypertrophous right ventricle. In the innominata and carotid arteries slight murmur exists with the first sound; an apparent reduplicate second sound follows. Over the upper portion of the right anterior chest wall a prolonged, though diminishing, murmur usurps the place of the first sound; a second reduplicate sound succeeds. At the lower third of the right chest the first murmur becomes hoarser, followed by a second reduplicate sound. Over the first left interspace there seems a præsystolic murmur, followed by a splitting of the first sound, and then diastolic murmur over the third left interspace about an inch above the nipple, and corresponding to the grating thrill named, in place of reduplication of the first sound *bruit de cuir* is heard, followed by diastolic murmur. The author then made an analysis of these signs in their relation to differential diagnosis. The great dilated hypertrophy of the left ventricle, the powerful impulse of the innominate and carotid arteries, together with the character of the tracing, would seem to imply aortic imperfection. Bearing in mind the curvature of the dorsal spine and the asymmetry of the right half of the thorax, it is possible that the heart and aorta may be displaced to the left of the sternum, giving rise (as it is admitted such condition does in some exceptional instances where valvular disease coexists) to both thrill and murmur over the second and third left interspaces. Such displacement would be further favoured by the dilatation of the vessel that assumedly exists. And, additionally, we have to consider how vastly more frequent it is as compared with pulmonic valvular disease. It seemed to him, however, that upon examination such a view may not be justified. In addition to aortic disease the case presents all the theoretical and practical acquirements for imperfection of the pulmonic outlet in full perfection: the site and direction of the fremitus; the site and direction of the murmurs, and the dilated hypertrophy of the right ventricle, are strong grounds for diagnosing such imperfection. Dr. Cockle admitted that conceding the implication of the pulmonary artery, a question might arise as to how far the signs might result from some extrinsic cause, *e.g.* pressure narrowing the lumen of the vessel. But he only hinted at such a contingency, regarding it but lightly.

It would be but reasonable, perhaps, before the Fellows examine the case, that the conclusion should be stated at which the author had arrived, but it was a conclusion that he would readily amend under some truer insight of the Fellows into the nature of the facts. It appeared to him to be probably a case of congenital defect, the precise nature of which he did not attempt to explain; neither could he assert anything with reference either to the condition of *ductus arteriosus* or that of the *foramen ovale.* Although the history of the early childhood is wanting, we do know that valvular imperfection may at times be long latent.

He also thought that there was obstruction and regurgitant defect both of the aortic and pulmonic orifice. Even murmur conducted up the carotid and the absence of cyanosis would constitute valid objection to the inference as regards the pulmonic outlet, inasmuch as the presence of the one and the absence of the other are recorded (*vide* the Society's 'Proceedings,' vol. ii).

Some difficulty occurred to the author as to the *rationale* of what seems to be a widely-heard reduplication of a second sound, but if the Fellows should agree with him as to the fact, he might hazard an explanation; and lastly, he would state that the signs may not be quite so clear to-night as he had described them. They change somewhat at times under the influence of emotion, but, in the main, they will be found substantially correct. At present the health of the patient is tolerably good, and she can walk a mile without any unusual discomfort.

Dr. DAY thought that the patient had great hypertrophy and dilatation of the heart. He had never heard such a well-marked pulmonic murmur before. He had often seen such cases associated with ovarian tumour. After the removal of the tumour the murmur had disappeared in the course of fourteen days. He thought the murmur in this case was due to the pressure on the heart caused by rickets.

Mr. COLES asked how long this case had been suffering from spinal curvature. He considered this a case of antero-posterior or bowed, not lateral, curvature, and stated that in the incipient stages of Pott's disease patients were frequently treated for symptoms referable to the heart, citing a case that came under his care eighteen months ago.

The PRESIDENT said that the patient had been under his observation for the last thirteen months. The further discussion was postponed in order that the woman might be more carefully examined by the Fellows.

Dr. SUTHERLAND then read his paper on

SLIGHT DEVIATION FROM HEALTHY MENTAL STANDARD.

The author suggested the desirability of having some definite standard by which unhealthy might be compared with healthy minds. In the days of Plato the subdivisions in use were feeling and thinking, and these were considered to be the most useful, not only for theoretical, but for practical purposes in diagnosing mental diseases. Feeling was the part of mind usually attacked first. Thinking or intellect only suffering in the more advanced stages of the disorder. The principal feelings or emotions were then enumerated. These appeared to arrange themselves into couples, the first of each couple being distinguished by pleasant, the second by disagreeable characteristics. They were as follows:—Love and hatred, benevolence and anger, joy and grief, courage and fear, modesty and pride.

Each emotion was also found to exist under four distinct conditions:—1st, normal, passive, or moderately active; 2ndly, intense, giving rise to a true emotion; 3rdly, more intense, the emotion being carried to the furthest point consistent with mental health; 4thly, extremely intense, or perverted to such an extent as to become absolutely morbid, and to indicate unsoundness of mind. For instance, sympathy might soon be transformed into grief, grief into despair, and despair into melancholia and depression.

When the emotions become morbidly affected, passing into the fourth stage, they not only indicated unsoundness of mind, but also were representatives of certain forms of insanity. Thought or intellect could also be divided under certain heads.

Bain enumerated the following subdivisions:—Memory, abstraction, conception, reason, judgment, imagination, perception. Each of these healthy intellectual functions possessed a corresponding morbid condition, but when diseased they usually indicated that a more advanced stage of the disorder had been reached than when the emotions only were affected.

Several cases were then related as illustrating the various degrees in which first feeling and then thinking became disordered.

It was also noticed that subsequently to an attack of insanity, although the patient might have recovered almost all his intellectual capacity, the emotions were still found to be in an unstable condition, irritability, extreme diffidence, erotic tendencies, conceit, and other morbid expressions of feeling being then manifested.

The treatment of the cases where only the emotional part of the mind was affected was then touched upon. If this alone had suffered, change of scene and proper moral and hygienic remedies frequently arrested an attack of insanity. If, on the other hand, the intellect were attacked, and it was seen that the disease must run its course, it would be extremely unwise to allow the patient to travel or proceed to any distance from home treatment and medical appliances.

If the relations and family physicians could only be taught to estimate the importance of the premonitory symptoms, some of which were manifested only by an exaggerated state of the emotions, many cases might be prevented running into the hopeless abyss of chronic insanity by early treatment.

Dr. Crisp asked if the author had had any experience of insanity in the lower animals.

Dr. Dowse considered that Dr. Sutherland's paper touched on the borderland of insanity. He regretted that psychologists should be thought to be alienists. The author had quoted many cases where an injury was the exciting cause. Many patients, however, recover from such cases without any symptoms of insanity. Again, a patient may be perfectly sane unless you raise his brain to a hypernormal state, when you get trembling of the lips and other signs of excitement.

Dr. Sutherland said he had seen insanity or madness in dogs. He had taken the name alienists from the word *aliéné*. He agreed with Dr. Maudsley that the emotional part of the mind was affected before the intellectual, although the friends of the patients are loth to believe such to be the fact. It is much better to prevent insanity than to attempt to cure it.

Dr. Percy Boulton then read a paper, which showed the value of

INTRA-UTERINE INJECTIONS OF PERCHLORIDE OF IRON,

if the uterus be sufficiently dilated, in cases of uterine hæmorrhage other than post partum.

The three cases of uterine hæmorrhage which I am about to relate are, I think, interesting, as showing the value of the intra-uterine injection of perchloride of iron in some cases of hæmorrhage other than post partum. I also think they are worth recording in order that others who may venture on this plan of treatment may profit by my experience of the strength of the solution to inject.

Case 1.—M. M—, æt. 38, came to me at the Samaritan Hospital on June 27th. She was married, the mother of seven children, and the catamenia had been regular up to May 4th, since which time she had been flooding continuously. Her pulse was small and thready; skin and mucous membranes blanched; and she could scarcely move without feeling faint.

On examination nothing was discovered to throw any light on the case. A patulous os and some enlargement of the uterus was suggestive of recent abortion. The patient, however, was sure she had not been pregnant. In this I believe she was mistaken, and the ovum probably had escaped with some clots previous to her visit to the hospital.

It was quite clear that the patient could not bear the loss of more blood, so in order to prevent this, and to procure speedy contraction of the uterus, I passed a speculum, and through this a gum-elastic catheter, open at the end, was inserted some two inches and a half into the uterus. A three-ounce straight syringe (the only one at hand) was charged with equal parts of Liquor Ferri Perchloridi Fort. and water, the catheter and syringe being connected by a bit of india-rubber tubing, and the contents slowly injected into the uterus, taking care that the fluid escaped by the side of the catheter as fast as it was injected. Having withdrawn the catheter, and wiped out the speculum, a dry plug of cotton wool, with a string attached for its subsequent withdrawal, was passed up to the os, and the speculum removed. The uterus immediately contracted very forcibly; the pain produced was so great that I had to give opium in full doses, and keep the patient under observation. All pain ceased in twenty-four hours, and not a drop of blood was lost afterwards; the patient on July 8th declaring herself feeling better than for many years.

Case 2 was a very similar one. She came to me at the Samaritan Hospital, and from the history I concluded that there was a dead ovum in the uterus. The immediate flooding in this case was greater than in the last, though the patient's condition was not so critical. Remembering the former case, I decided to inject a weaker solution of iron. I proceeded as before using a one-third, instead of half, solution. In the few moments between inserting the speculum and catheter a tumblerful of blood was lost.

The effect of the injection was immediate. No more blood was lost, and I was able to wipe out the speculum and insert a dry plug of wool as before. In this case the pain was intense, and opium had to be given. The patient remained under observation some time, and then wishing to go home was sent in a cab. Next day a relation brought me an ovum which had been expelled. She told me that all pain had ceased in the night, and that there had been no further loss. This patient made a speedy recovery.

Case 3 was a uterine fibroid of the anterior wall, with enormous monthly loss, uncontrolled by ergotine, administered hypodermically every other day, for a week before and during each "period."

In this case everything was tried and found wanting, and the patient had got so dreadfully anæmic that it was quite evident that something heroic must be done, or death would speedily put an end to all treatment. Enucleation was out of the question, as the tumour was mural, and decidedly more sub-peritoneal than sub-mucous. I injected into the uterus Liq. Ferri Perchloridi Fort. ʒvj, and hot water ʒxx, making three ounces in all, using a gum catheter and india-rubber bottle holding ℥iij, in the manner described before. It gave very little pain and checked all further bleeding at once. This has been repeated every month for some time, with the same result each time, and there has been very marked improvement in the colour and strength of my patient. The local styptic effect has seemed to be beneficial, as the tumour has diminished in size, and I think this is partly due to the contraction produced by the iron cutting off the blood supply in a manner similar to that of ergotine.

The hæmorrhage of fibroids is the symptom most to be dreaded, and I quote these three cases together as I think there is a distinct practical outcome, viz. that one-half and one-third solutions are dangerously strong for intra-uterine use, while one sixth injected hot (about 100°), slowly and with room for escape, is a safe and most valuable remedy in uterine hæmorrhages other than post partum. The one-sixth solution has in my hands had all the good and none of the bad effects of the stronger ones.

Usually the hæmorrhage of fibroids can be controlled by ergot, but in extreme cases when it is otherwise, I would commend this intra-uterine treatment, which I have now used frequently in several cases, and always with similar results. The use of stronger solutions is attended with great risk of setting up inflammation or even death, such death being rather the result of shock than due to clot carried in the circulation.

It may be argued that in Case 3 the ergot has brought about the improvement, but even if so I believe the patient would have died from hæmorrhage except for the intra-uterine injections, and, therefore, if the local styptic has had no other effect it has, by prolonging life, given time for the ergot to act.

The **President** considered that the treatment adopted by Dr. Boulton had been most satisfactory.

Dr. **Routh** agreed in the President's opinion. He thought that had not the patients mentioned in the first two cases been pregnant the result would have been fatal; in this form of treatment dilatation of the os is the important point to be carried out. If the os be not dilated the injected fluid cannot escape, therefore peritonitis must ensue. He drew attention to the power hot water possesses of stopping uterine hæmorrhage. He considered that the successful treatment of the third case was greatly due to the hot water used.

Dr. **Wynn Williams** said that there was no doubt that death could be sometimes caused by injecting the uterus. He thought no uterus should be injected until the os had been so far dilated that the injected fluid could readily escape. For years he had been in the habit of arresting uterine hæmorrhage by dabbing the cavity of the uterus with Tinct. Ferri Perchlor.

Dr. **Rogers** agreed that the os should always be dilated before the uterus is injected; he had had a case of death from shock on the table from injecting the uterus with perchloride of iron without dilating the os.

Dr. **Percy Boulton**, in reply, said that dilatation of the os was unnecessary in the first two cases, because in them it was already patulous. The cases of death from injecting the uterus have all occurred after a very strong solution of the perchloride had been injected. There should always be a sufficient dilatation of the os before the uterus was injected, so that the injected fluid might readily escape.

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